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ABSTRACT

The following are among the 40 papers included in this proceedings: "Code of Ethics for Interdisciplinary Care" (Thomasma); "Training Model for Increasing Team Excellence and Efficiency" (Clayton, Lund); "Organizational Structures of Health Care Teams" (Farrell, Schmitt, Heinemann); "Nutrition Support Practice" (Johnson); "Dividing up the Work on Health Teams: The Role of Administration and Management" (Baldwin, Rowley); "Interdisciplinary Health Team and Organizational Development Literature: An Analysis of Approaches to Conflict Recognition, Resolution, and Management" (Drinka); "Application of Donabedian's Patient Care Evaluation Categories to a V.A. Hospital-Based Home Care Team" (Paterson, Turner); "Group Work with Parents of Learning Disabled Children" (Indelicato); "Interdisciplinary Research with Down Syndrome Children" (Edwards); "Reaching Out to the Elderly Substance Abuser: An Interdisciplinary Model Involving Education, Early Intervention, Treatment, and Referral" (DiMatteo); "Collaborative Care of the Older Adult: Role of the Preceptor in Interdisciplinary Team Training" (Mahairas et al.); "Evaluating the Effectiveness of Geriatric Health Care Teams" (Heinemann, Tsukuda); "Interprofessional Relationships in Geriatrics: Ethical and Legal Considerations" (Kapp); "Influence of Formal Preparation for Interdisciplinary Teamwork on Team Knowledge Levels" (Monroe-Clay); "Interprofessional Education for Team Practice" (Billups, Julia); "A Conceptual Framework for Planning Interprofessional Education" (Grant, Casto); "A Teaching Model for an Interdisciplinary Health Care Team Course" (Ivey et al.); "A Course on Third World and Health for Allied Health Students" (Vittetoe); "Team Education: What Is Needed?" (Stube); "Interdisciplinary-Primary Health Education Is Alive and Well in the Bronx" (Rosenberg); "Nutrition/Feeding Clinic: Integrating the Professional Student" (King et al.); "The Interdisciplinary Adult Neurogenic Clinic" (Madsen et al.); "Interdisciplinary Development of a Curriculum in Behavioral

Pediatrics" (Coury et al.); "Community Hospital Staff and University Faculty Development of an Interdisciplinary Education Experience for Students in Gerontology/Geriatrics" (Blackford et al.); "A Service/Learning Model for Interdisciplinary Teamwork in Health and Aging" (Clark, Spence, Sheehan); "A Meta-Analysis of Interprofessional Education at the University of Illinois at Chicago" (Lipetz); "Attitude Changes among Students Engaged in Interprofessional Education" (Casto, Grant, Burgess-Ellison); "Interactive Style, Motivations, and Teaching Effectiveness of Field Placement Instructors in an Interdisciplinary Health Team Program" (Byrne); "An Interdisciplinary Curriculum for a Geriatric Education Institute" (Gardner, Ranta); "Multiclinic" (Gatlin et al.); "The Commission on Interprofessional Education and Practice at the Ohio State University" (Casto); and "Interprofessional Education in a Rehabilitation Setting" (Wongsam et al.). A cumulative index of interdisciplinary health team care conferences from 1976-1986 completes the document. (MN)

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INTERDISCIPLINARY HEALTH TEAM CARE:
PROCEEDINGS OF THE EIGHTH ANNUAL CONFERENCE

September 18-20, 1986

Columbus, Ohio

Editors

Marjorie L. Brunner, M.S., M.T.(ASCP)
R. Michael Casto, Ph.D.

1987

School of Allied Medical Professions

and

Commission on Interprofessional Education and Practice

The Ohio State University

Preface

The Eighth Annual Conference on Interdisciplinary Health Team Care, cosponsored by the School of Allied Medical Professions and the Commission on Interprofessional Education and Practice at The Ohio State University, was held September 18-20, 1986, at the Hyatt on Capitol Square, Columbus, Ohio. Faculty from the School and Commission have been active participants in this Annual Conference throughout its history and were pleased to have the opportunity to join in its sponsorship.

The Conference was preceded by two workshops focusing on a) developing proposals for funding interdisciplinary education and practice and b) planning and implementing interprofessional continuing education programs. The Conference keynote address, "A Code of Ethics for Interdisciplinary Care: A Working Paper", was presented by David Thomasma, Ph.D., Director of Medical Humanities, Loyola Medical Center. The address was followed by the presentation of a case study of an Alzheimer's patient through a retrospective video interview of family members. Participants were seated interprofessionally at round tables where discussion facilitators guided each group to identify the issues represented in the case, the underlying values and ethical issues, and the use of an interprofessional code of ethics in addressing the dilemmas which emerged. Reports from the round tables to the conference as a whole were then followed by a synthesis and summary of the issues by Dr. Thomasma, with emphasis on their relationship to the ethics of interdisciplinary care. This aspect of the Conference, although not represented in the Proceedings, was felt to be extremely valuable by the participants.

The Proceedings of the Eighth Annual Interdisciplinary Health Team Care Conference includes the keynote address presented by David Thomasma, Ph.D.; 33 referred papers presented during the conference; and abstracts of six poster sessions. The papers are organized around the ten thematic conference sessions and each section of the Proceedings is preceded by an introduction written by the Session moderator. Most of the papers were collaborated efforts. Many of them represent collaboration between institutions as well as among disciplines.

The Interdisciplinary Health Team Care Conference continues to expand. The 103 participants in 1986 came from 20 states and Puerto Rico, representing 45 different institutions. Twenty different disciplines were represented. Of the participants, 19% indicated nursing as their profession; 13%, social work; 12%, health sciences or higher education; 9%, occupational therapy; 7%, psychology; 5%, medicine; 5%, gerontology; and 5%, medical technology. The remaining 30% were members of one of the remaining 12 disciplines.

Partial support for this conference was provided by the School of Allied Medical Professions Office of Continuing Education and the W.K. Kellogg Foundation through its interprofessional faculty development program with the Commission.

Ohio State University, the School, the Commission, and their constituent academic units in partnership with the W. K. Kellogg Foundation, the Columbus Foundation and eight state professional associations, have developed extensive educational and research programs in interprofessional education and practice which have been reported to this series of conferences. The relationship of these programs and their faculty to the Interdisciplinary Health Team Care conferences has been mutually gratifying and important to the continuing development of research and education in interprofessional collaboration.

We would like to thank the following members of the Eighth Annual Conference Program Committee for their many contributions: Carolyn N. Burnett, M.S., LPT; Gretchen Crawford, Ph.D., RN; Eleanor P. Nystrom, Ph.D., OTR; Roberta G. Sands, M.S.W., Ph.D.; Elaine Schroeder-Zwelling, Ph.D., RN; John R. Snyder, Ph.D., MT(ASCP); Gregory L. Trzebiatowski, Ph.D.; Stephen L. Wilson, Ph.D.

Marjorie L. Brunner, M.S. MT(ASCP), Conference Chair
R. Michael Casto, M.Div., Ph.D.

EIGHTH ANNUAL CONFERENCE ON INTERDISCIPLINARY HEALTH TEAM CARE

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KEYNOTE ADDRESS

A CODE OF ETHICS FOR INTERDISCIPLINARY HEALTH CARE

David C. Thomasma, Ph.D.
Loyola University of Chicago Medical Center

Over the past four decades enormous changes have occurred in health care delivery. As a consequence of these changes, the historical Hippocratic edifice of the health care enterprise has been shaken to its foundations so much so that Robert Veatch announced in the third decade that the Hippocratic ethic, with its emphasis on paternalism rather than autonomy, was dead.[1] We are now entering a post-Hippocratic era whose future is uncertain. In this future era can the health professions ever again be united under a common set of moral commitments?

The task before health professionals today, then, is a task of reconstruction, as Edmund Pellegrino has suggested.[2] This task requires sifting through still viable elements of past commitments and winnowing out those that are no longer viable. Together with Dr. Pellegrino, I have completed a manuscript in which we develop a theory of beneficence-in-trust that we think is responsive to contemporary needs yet preserves the best of the Hippocratic tradition. Beneficence-in-trust strikes a balance between wholesale absolutizing of the principle of autonomy and traditional health-care paternalism by establishing that beneficence, acting in the best interests of the patient, must take into account the preferences of the patient based on values. Put another way, beneficence requires attention to autonomy, but it is more important than respect for autonomy in certain situations.[3]

My exploration of the elements that should comprise a new interdisciplinary code is based on this approach. I shall proceed as follows. First, I will briefly note the changes in health care that occasion the current ethical crisis. Then, I note the impact of these changes on the roles and duties of health professionals.

Any attempt at reconstruction must recall the cultural backdrop of deconstruction as well. Remember that dissolution of the bonds of society creates fissures in ethical theory and conduct. There has been a loss of moral consensus, the moral authority of religious institutions, and reliance on public and religious authority in general. The resultant moral diversity is buttressed by better education, a myth of rugged individualism, a breakdown of family life, a spread of consumer rights, participatory democracy, and the rise of civil rights for different groups in society. While the focus of this paper is on professional ethics, further serious work is needed on the elements of deconstruction and reconstruction at work in our culture that underlie professional ethics. Hence, this effort can only be regarded as a working paper. Its purpose is to prompt discussion, not to close it.

Changes in Health Care

It is important to underline at least five recent changes in health care delivery. These changes give rise to the need for an interprofessional code of ethics in health care.

Increased Technologization. While technology is certainly a human good if aimed at important human values, it can threaten these values as well if misapplied. A major difference between the way humans used tools in the past and how they use them in our civilization is, as Heidegger noted, the all-pervasiveness of our technology.[4] Among other things this all-pervasiveness leads to an uncritical acceptance of the technological imperative. Health professionals fail to take responsibility for technology by adjusting its aims to the values of patients and their families.[5] Further, as technological interventions increase, more specialists are created to manage a specific branch of the treatment, thus, further diffusing responsibility for decision-making.

Increased Institutionalization. As the range and number of specific new technologies increases, so too does the need for the institutionalization of health care. Large CAT scanners require air-conditioned rooms for their computers and record storage. Interleukin 2 therapy for cancer requires a support base in intensive care to monitor the ascites that results, as well as sophisticated electrophoresis technology. Computerized medical records and billing also require institutional supports, as does modern physical therapy with its needs for whirlpool baths and exercise machinery. In fact, a majority of health professionals, following this and like technology, labor in institutions. In many cities such as Houston, Memphis, and Chicago, the health care industry ranks first or second. Huge institutions predominate in this industry. They are major employers.

Institutionalization creates a number of ethical problems for health professionals. Not the least of these problems are the conflict of loyalties between the patient's needs and the work-environment, cooperative mechanisms of team health care, and attendant dilemmas about responsibility. Further, the patient's values are at greater risk in an institution than they would be in a one-to-one relation or at home.

Increased Specialization. Earlier I mentioned that an increase in technology invites new specialties. As specialties grow, each formulates its version of professional responsibility in a code of ethics. Almost all specialties now have one. This process, sad to say, has not always led to interdisciplinary cooperation. In the main, the codes have instead lent support to exposed individuals within a certain profession in their disagreements with others in other professions. In fact, many specialist codes were created for just that purpose, arising as they did out of a crisis created by interprofessional conflict.

Thus, specialization can lead to a fracturing of joint responsibility in the very task of gaining some control over the articulation of one's own ethical duties. The move of physical therapy "out from under" the AMA symbolizes this struggle.

Increased Professionalization. There is a concomitant danger of any code, too, that while explicating duties, it formalizes and legalizes the professional's activities to such an extent that uncovered crises can lead to what I call "analysis paralysis." Analysis paralysis signifies an over abundance of ethical and legal analysis of one's duties and an under representation of courageous action.

Is it possible, then, to be too professionalized? Yes, it is. We all know how easy it is to hide emotions behind a professional facade. But, we do not often consider the ways in which appeal to professional duties can mask a betrayal of even more profound human values. This is dangerous in the professionalization process, as Wendy Carlton pointed out. As students adopt role model "professional" behaviors, they often abandon the ethical reasoning skills taught to them in earlier training.[6]

If professionalization can be dangerous for professionals, its impact on patient values is tragic. It often forms the basis of demeaning those values by appeal to the fallacy of expertise. This appeal, in turn, leads to unnecessary paternalism in health care: "I know what is best for you," and its alternative expression, "You do not know what is best for you."

Increased Economic Concerns. Even more recent than the other changes I have noted is the dramatic rise in concern about economics in health care occurring over the past several years. It has led to a national nightmare, an institutional orgy, and a professional challenge. Concern about the viability of hospitals has created an identity crisis of unprecedented scope for health care, particularly religiously sponsored health care. This identity crisis touches each health care specialist as well.

Failure to compete with colleagues at St. High Tech, or St. Bigger-Than-Thou, or St. Price-Waterhouse, means a loss of jobs for one's institution and even a failure to provide quality of care such that one's conscience is not violated during the steps taken to cut costs in order to compete. The same competition may destroy decades of commitment and labor by many dedicated health professionals when the institutions shuts down. In the end, the identity crisis of our institutions spills over into the professions. This has already occurred. There are many articles questioning the role of health professionals in an age of cost-cutting in health care.[7,8]

Changing Roles of Health Professionals

The changes just detailed have an enormous impact on the traditional roles of health professionals. First, the traditional duties of health professionals toward their patients can suffer. Primarily, the duty of beneficence can be put aside in favor of other duties. I think this is dangerous, and therefore, concentrate on the impact of changing roles on the health professional-patient relationship in the next step. Changes detailed in the first section tend to bifurcate and diffuse the duty of beneficence.

Second, a new duty to keep abreast of technology is introduced by current changes in health care. In the past, of course, professionals kept abreast of the changes in health care, as best they could. Before the 1940, these were few and far between. Since then, however, the changes have been so extensive that many basic scientists have observed that the science upon which health care is based has changed so dramatically from the time they were trained that it is out of date. The same is true of the technology. As a consequence, much more time must be devoted to keeping one's skills honed to perfection than previously. This constitutes an essential duty.

Third, since health care is delivered in institutions, health care professionals become a new kind of "company person." In addition to duties towards patients and duties towards professional skills, today's health professional must constantly be concerned about the institution in which he or she practices. This concern does not stop at worrying about the delivery of quality care. It often takes the form of fear that the institution in which one practices may not survive the current market competition. This is dramatically brought home in any discussion of continuing the care of a patient for whom there is not further reimbursement. Out of whose pocket should that care come? How many nurses will that care cost? What technological innovation should be sacrificed in favor of the patient?

Fourth, a new kind of work force ethic is introduced because health professionals working in institutions and in interdisciplinary environments must now accept a duty to other specialists. This duty includes respect for their insights and expertise about the care of patients, their roles in the institution's commitment to quality of care, and their place in the ideal "team" that meets the needs of the citizens of the area in which the institution is placed.

Then of course, in the fifth place, are the duties to the profession itself. In this category are all those requirements to obtain the best knowledge and skills one can, to pass these on to future generations through primary and continuing education, to advance the interests of the profession and of one's specialization, and to constantly increase the standards of conduct. As the other duties become more complex, so too do these duties. For example, as orthopedics advances, so too does physical therapy, and the latter's relationship with itself and with medical specialties, as well as with other allied health professions, such as occupational therapy.

Sixth, because many health professionals now practice within Health Maintenance Organizations and Preferred Provider Organizations, they acquire duties as gatekeepers that almost directly conflict with their duties to act in the best interests of their patients; sometimes the role of clinical economist can conflict with concerns about quality of care and the survival of the institution. In other words, while cutting costs is a good, it can also become a conflicting duty with the others listed in this section.

Finally, in our advanced health care delivery system, health professionals must now assist public policy planners in developing health care policy that is most equitable to all patients. This means that professionals must become political. To be sure, national associations have always played a prominent role in lobbying for health care matters. I mean something more than this, though. I think that each professional must make political judgments, for example, about the defense budget, as a requirement of their professional duties. This becomes an inherent politicalization of the professional.

Impact on the Healer-Patient Relationship

As mentioned in the previous section, the changes in the way health care is delivered lead to the danger that the patient, the primary focus of health care, can be neglected in favor of meeting other needs. That is to say, other duties can diffuse the primary obligation traditionally aimed at the patient.

Let us look at these in more detail.

First, increased technologization means that patients and their healers have more options before them. If these options are not spelled out in some detail, patients will tend to honor the choices made for them by their healers. Informed consent, and even respect for persons, will suffer. Thus, new options require greater sensitivity to the values of patients, increased communication with them about these values and the impact of the proposed technology on them, and greater respect for the wishes and preferences of patients than health care professionals have demonstrated in the past. My own observation of health professionals leads me to suggest a rule: as technology increases, communication about that technology with patients decreases. The complexity threatens to overwhelm both patients and healers.

Second, the increased institutionalization of health care leads to the danger that patients will become infantilized by the very need every institution has for rules. One can think of the many degrees of vulnerability created by disease itself. To these add the normal rules that institutions lay down for "smooth running." Patients may not be able to visit their loved ones in the recovery room because insurance won't permit it or it leads to dangers of infection. Little children cannot visit their parents in the intensive care unit. Patients must be out by 11:00 a.m., or they will be billed for another day. For example, older persons rush around their rooms trying to find their slippers and experience increased anxiety as check-out time approaches. Patients are "dumped" when their insurance runs out, or they are sent home to be readmitted later under some other mandated DRG (diagnotically related group) category. The example are endless. None of them mean harm to patients. In the end, though, the rules often do not have as their object the best interests of the patients.

Third, increased specialization can confuse the patient. The patient usually tries to focus on a single health professional as the primary care-giver. Because of specialization, however, in many instances it is hard to decide who that person might be. As the person's organ systems break down, is the primary person the kidney specialist, the physical therapist keeping the joints and muscles moving, the respiratory therapist involved in maintaining the proper breathing and blood gases, the internal medicine specialist measuring the urine output? The fact is, all specialists are essential to the care of the patient. The case we will discuss presents just that crisis point for interdisciplinary care: all specialists are essential, so how can the ordering of their perceptions be properly carried out. A new kind of practical wisdom is required of healers and patients to keep the proper perspective on this matter. Is there to be a one and the many? A captain of the team? Or a single rules? Or a democracy of care? What models are appropriate to address this problem?

Fourth, as a consequence of increased technologization, specialization, and institutionalization, professionals are now strangers to patients. The patient rarely can count on having his or her own doctor at the bedside in a modern institution. Further, the constant parade of specialists dealing with the patient's illness or accident represents a never-ending encounter with strangers,not only strangers in the sense of persons the patient does not know, but also strangers in the sense of persons who do strange, unfamiliar things. In fact, due to mobility, the patient's problem may have arisen miles from home where none of the health professionals is known. This is all the more reason, then, for professional standards. The ethics of most of health care today calls for an ethics of strangers. What does this mean?

An ethics of strangers means, at the very least, that all professionals introducing themselves to patients, should meet certain identifiable minimal standards. According to these standards the patient may be able to anticipate recognizable behaviors from any and all members of a specific specialty or branch of the health professions. These should be made as explicit as possible so that the patient's ignorance both of the person and the functions of the individual specialist can bear no detrimental fruit for his or her course of treatment.

Finally, the economic factor cited above creates some dangerous consequences for the health professional-patient relationship. I call these consequences the case of the "wall-eyed healer." If we approach patients with one eye on their best interests, and another on our own, then we suffer from a wall-eyed ethics. Among the other concerns evident to date, concerns that may distract from the patient's best interests, are:

1. Unionization. Recall the strikes, most often by nurses and residents, that seek improved working conditions.[9] The ethical problem with these strikes is that patients almost invariably suffer some diminution of care. This is justified by the utilitarian argument that improved working conditions (sometimes improved salaries are implied) will eventuate in improved care for patients. Current patients are asked to suffer for the sake of future generations.

2. HMO's and PPO's. The crux of cost-containment delivery systems is to cut down on unnecessary costs. Patients who join such systems supposedly are aware of this feature and agree to it. Nonetheless, at certain times in their treatment, the healer is at least as concerned with cost containment as with the patient's best interests. This move is also justified according to utilitarian reasoning: the greatest good in this case being keeping the cost of health care down to the expense of a full panoply of tests and/or treatments for the individual patient.

3. Health Policy. Health policy itself can distract from the care of the patient. Institutional health policy, for example a policy on the care of Jehovah's Witness patients, may issue in a detrimental decision about intervening in an individual patient's life. More insidious, perhaps, is the role of policy itself. It can be said that policy ethics itself leads to a dissolution of the unique moral struggle that should characterize our professional decisions.[10] Some physicians and other health professionals are willing to abandon their ethical decision-making power in favor of national health policy, e.g., on the care of persons over 65 or on access to high technology medicine. Thus, an implicit compact with the patient to grapple with the particular demons of the case may be abandoned in favor of institutional or national health policy.

Ethical Crisis points

From these considerations, a number of ethical crisis points can be identified. In constructing these, I will proceed by identifying those touching on the patient, the professional, professional relationships to institutions, to other professionals, and to society-at-large. The same categories will then govern my suggestions for an interprofessional code of ethics.

Patients. Among the critical ethical concerns in dealing with patients in this technological age is that their personhood be respected. After all, the interventions we can marshall should still serve the good the patient. If we are not to succumb to the technological imperative, then respect for persons must reign supreme in our dealings with patients.

One way to show this respect is to tell patients the truth, not just about their illness, but also about what to expect from each professional treating them, and what to expect from the treatments themselves.

A second way to show respect for persons is to give patients the benefit of options in their care. Making choices is a fundamental way to exercise freedom.[11] Giving this choice to patients represents a fundamental assurance by health professionals that, despite the losses and concomitant vulnerability of illness, some freedom is maintained. Besides, many studies have shown that involving patients in decisions about their care has salutary effects on their recovery.[12]

A third way of supporting respect for persons is to respect the autonomous decision-making of patients. Note that I did not put this value first, for I think that many ethicists are guilty of making respect for autonomy a formal condition of possibility for medical ethics rather than a normative axiom demonstrating respect for persons. One such thinker is surely H. Tristram Engelhardt, Jr. In his This Foundations of Bioethics, Engelhardt argues that a peaceable society in a pluralistic age requires that society and medicine grant as much autonomy to individuals as possible.[13] This shift of autonomy from a normative axiom fulfilling the principle of respect for persons to a meta-ethical condition of possibility is dangerous in medicine and in ethics. It is dangerous in medicine because it supercedes the need to act in the best interests of patients, sometimes at the expense of their current preference (in favor of a value they maintain).[14] It is dangerous in ethics because it proposes an individualistic conception of ethical theory, rather than a social one.

The fourth way, then, of respecting persons is to act in their best interests. This is the principle of beneficence that has been seen as central to health care since its inception. It has often been clouded, as it is in the Hippocratic Oath, by traditional medical paternalism. But this paternalism need not be essential to medicine. Recall that paternalism involves the violation of a moral rule in favor of acting on behalf of patients, e.g., the rule of truth telling, or respecting their autonomy, etc.[15] Beneficence, by contrast, must engage the values of the patient. It will not do to override fundamental values of patients and of society to act in their supposed best interests as paternalism has done in the past. In this sense, autonomy represents a foil to traditional paternalism. Yet not all preferences patients and their families express are in accord with their own hierarchy of values. When this is the case, respect for autonomy may abandon patients to ill-advised wishes that, in turn, may violate their own value system. In these instances, beneficence should take precedence over autonomy.[16]

Finally, confidentiality is required in treating patient decision-making and respect for persons with the dignity they deserve. We do very poorly with protecting confidentiality. The reasons have to do with the institutionalization and specialization already discussed. As more and more individuals are required to know about the patient's case in an institutional setting, the dangers of spreading information about the patient increase. Colleagues sometimes get sick, and their curse and treatments are matters of "public" record in our institution, usually because we care about them. A patient's values are sometimes derided in the hall where colleagues passing by may be brought into the discussion. Even the role of clinical ethicists in this matter requires further clarity.[17] Confidentiality is also threatened by the power of the Federal Government to investigate all charts of patients participating in Federally funded research grants. The same threat occurs from well designed epidemiological studies (e.g., follow-up on heart attack victims) or patient-care follow-up studies, often done by nurses preparing for their Ph.D. degrees (e.g., a study of post-partum women ostensibly about their hygienic care, but actually about incidence of cancer).

The Professional. The professional must first spend a significant amount of time increasing knowledge. As noted above, this is now a function of rapid advances in scientific and technological knowledge. As an ethical obligation, then, it stems from the professional's commitment to the good of the patient. But this ethical duty is also a function of the ethics of strangers already adumbrated. If patients are to place their trust in strangers, they must be able to do so on the basis of explicit promises covering the expertise of each interdisciplinary team member involved in their care. This expertise then becomes a compact with the patient.

Second, the professional must continually increase his or her skills. Skills are also part of the covenant with the patient. Further, continual enhancement of skills is required by the constant changes and improvements in the delivery of care. This, too, is an ethical obligation based on similar considerations as with the increase in knowledge.

Third, a modicum of self-interest is presupposed in a complex health care environment. Individuals must nurture their own private life seeking fulfillment and enrichment. The reason is that, despite guidelines and policies about ethical treatment of patients, individuals must be able to demonstrate virtues as professionals and as persons. Among the virtues to be nurtured are respect for the patient's values, integrity, and compassion. In fact, these virtues or characteristics are among those required by the American Board of Internal Medicine for its certification process.[18] They point to the heart of the personal and professional qualities of all healers. Admittedly, such virtues can be acquired through imitation of one's role model professors during training, but they also require individual stamina and courage that can only come from one's personal, private life. Another reason for self-interest is the establishment of sufficient strength to overcome the daily pressures, challenges, and adversities involved in applying complex technologies to individual persons, of melding science and values when one's decisions and recommendations count in the balance of human life.

Finally, one's conscience must be protected in modern health care environments. This means at least two processes must occur. First, our institutions and practices must encourage individual value judgments, the critique of one's values that makes an ethically critical individual, and the right to bring one's values to bear on treatment decisions about patients. If this encouragement does not take place, the institution becomes a locale for moral automatons--professionals in name only, who are not recognized as having values pertinent to their professional roles. They are asked only to carry out orders, even if these violate their conscience. The second process required by this ethical consideration is the freedom to withdraw from a case without prejudice to one's job and relation to other professionals. This freedom would underscore an institution's commitment to its health workers and further encourage their protecting their own values in delivering care.

Institutions. Professionals have a pronounced relationship with institutions. The first way they can assist institutions is through defining norms. I am convinced that we have virtually lost all ability to influence large-scale social institutions through political means (except through equally large-scale lobbies and action committees, that force us to lose moral commitments through political compromise. Yet, we can still have a moral impact on our institutions, especially those to which we devote almost a third of our lives. These institutions must develop through moral policy a kind of institutional conscience. The institution must stand for something, that something hopefully being an amalgam of individual health professional commitments. The best means of accomplishing this end is through participation in an institutional ethics committee.[19]

The second method of assisting institutions is through greater definition for patients of the roles of their care-givers, i.e., the relationships that should occur among health care team members and the roles of specialists. As already argued, the latter is particularly important in an age of strangers, and is essential toward maintaining an ethic of trust in such as age.

Third, individual health professionals have a moral obligation to their colleagues and to patients to control waste so that the institutions in which we practice have the best chance to survive.

Other Professionals.Two moral crisis points are created by the rise in specialists and the delivery of care largely through institutions.

The first is that team health care be acknowledged. No one health care professional can now manage all the aspects of secondary or tertiary care. Even in primary care, specialists are needed, and the other members of the team are critical for quality of care. This acknowledgement can take the form of a sort of professional humility and regard for the ideas, insights, and expertise of others.

The second feature is the respect for the conscience of other health professionals. If their expertise is to be acknowledged, so too must their personal and professional value system, provided it has been honed through critical thinking and training. This means that an essential feature of modern health care delivery would be the respect all healers have for the conscience of other healers and for the conscience of the patient.

Society-at-Large. The set of crisis points involve society itself. Healers have an obligation to society as well as to patients, one another, and the institutions in which they practice.[20]

The first of these obligations is to help establish health policy. As is well-known, national health policy affects clinical decisions and the large number of potential patients "out there" that need access to quality health care to meet needs they cannot meet for themselves. In addition to direct patient care obligations, health professionals must become involved in the political processes that impact on their patients. I see this as a derivation of their role to act in the best interests of patients. By contrast, Robert Veatch argues that the primary obligation of health professionals is social, an obligation from which they are relieved by society to meet the needs of individual patients unless some more important social obligation intervenes.[21]

The second obligation is to provide quality of care in accord with professional standards and national requirements, or in some cases, in spite of such national requirements. For example, the DRG system of reimbursement has tempted some to engage in patient dumping[22] and others to despair about equitable treatment for all.[23] In some cases this may mean treating patients without the ability to pay, as Mark Siegler has argued.[24] In others, it may require activating the ethics committee to establish explicit commitments of the institution towards the poor and the dispossessed.

Health Professions Code

The brief discussion of ethics crisis points for all health professionals can now lead to the elements that would be part of an interdisciplinary code of ethics. I proffer this code, not as the final word, but as a summary of the point of view advanced in this paper. Not all the problems have been detailed. This means that in an inductive approach, such as this one, some important considerations may have been left out earlier and therefore will not find a place in the code as presented.[25] Further, recall my comments in the introduction about a more complete examination of the elements of deconstruction in society. These have not been examined in this paper. Their exploration may lead to significant alterations in the design and scope of the code. These caveats excepted, nonetheless, the code does help make explicit some of the promises we might make to patients, one another, institutions, and society. Perhaps its chief utility is the ability of a code to spell out in advance the axiology (hierarchy of values) to be used by the professional, particularly the primacies of certain values over others in the case of a clash of duties, such as the duty to confidentiality and the duty to preserve life. These promises can become part of a compact or covenant publically made.

Oath of Commitment

I promise to fulfill the obligations I voluntarily assume by professing to heal, and to help those who are ill. My obligations rest in the special vulnerability of the sick and the trust they must place in me and my professional competence. I, therefore, bind myself to the good of my patient in its many dimensions as the first principle of my professional ethics. In recognition of this bond, I accept the following obligations from which only the patient or his or her valid surrogate can release me:

A. Duties Toward Patients

1) I will place the good of the patient at the center of my professional practice. Patients will be explicitly informed about what conduct they may expect from me as part of this commitment.

2) When the gravity of the situation demands it, I will place the best interests of the patient over my own self-interest, even over my own life. Thus, I promise to act primarily in behalf of my patient's best interests, and not primarily to advance social, political, or fiscal policy, or my own interests.

3) I promise to respect my patient's moral right to participate in the decisions that affect him or her by explaining clearly, fairly, and in language understood by the patient, the nature of his or her illness or accident, together with the benefits and burdens of the treatments and interventions I propose, and by respecting the decisions they make about these options.

4) I promise to assist my patients to make choices that coincide with their own values or beliefs, without coercion, deception, or duplicity. In case the patient is incompetent, I will assist validly designated surrogates, or lacking such, the family, in making such choices based on the patient's explicit, presumed, or constructed values.

5) I will care for all persons who need my help with equal concern and dedication, independent of their ability to pay.[26]

6) I will hold in confidence what I hear, learn, and see as a necessary part of my care of the patient, except when there is a clear, serious, and immediate danger of harm to others.

7) I will always help, even when I cannot participate in a cure, and when death is inevitable I will assist the patient to die according to his or her own life plans.

8) Nonetheless, because of my duty to preserve life, I will never participate in direct, active euthanasia, or conscious killing of the patient, even for reasons of mercy, at the request of the state, or for any other reason.[27]

B. Duties to Self

1) I will possess and maintain the competence in knowledge and skill I profess to have.
2) I will acknowledge my own professional and personal limitations to patients, and seek help from other professionals whenever I can for the patient's good.

3) When the patient's values or wishes pose a violation of my own conscience, I will make this respectfully known to them, and withdraw from the relationship as soon as another professional can replace me.

4) If I am paid by a health care delivery plan to assist in the control of health care costs, I will reveal this to the patient as a form of self-interest.

C. Duties to Institutions

1) I will assist the development of "committed institutions," that is, the development of institutional health policies based on this code of ethics and other ethical principles that may strengthen the care of patients.

2) I will take constant care to balance the duties to patients with the needs of the institution in which I practice to survive. Nonetheless, the first of my duties remains to the patient.

3) I will reveal to the patient the potential clashes with the institution's moral commitments as soon as possible in the treatment plan, and help arrange for a transfer of the patient should the latter find these commitments intolerable.

D. Duties to Other Health Care Professionals

1) Recognizing the limitations of my own competence, I will call upon colleagues in all the health professions whenever the patient's needs require.

2) I will respect the values and beliefs of my colleagues in any other health profession and recognize their moral accountability as individuals.

3) I will do my best to create interprofessional bonds of respect and deference whenever possible. Thus, I will try to the best of my ability to practice, embody, and teach the values of this code of ethics.

E. Duties to Society

1) To partially fulfill my social obligations, I will participate actively in public policy decisions affecting the nation's health by providing leadership, as well as expert and objective testimony when required.

2) In all efforts to deliver health care, I will remain committed to the primacy of the value of quality of care.

Conclusion: What Makes This Code Interdisciplinary?

This code is characterized by distinguishing the higher degree of altruism required by professional life from other forms of human endeavor. Further, the obligation of health professionals is grounded in the special vulnerabilities of the sick by promises to enhance their personhood by acting in their best interests. Further still, the code suggested here is based on the power of the professional to help meet a need a patient cannot meet for him- or herself.[28] Finally, the essence of this code rests on the requirement that professionals make a public, explicit promise to patients. In a number of ways, then, this code is unique, especially as compared to current, more legalistic entities.[29]

But how is this code uniquely interdisciplinary?

First, it makes explicit as public promises common duties of all professionals who participate in the discipline of medicine, from those like physicians, nurses, physical therapists, and social workers who lay hands on the patient, to those like medical technicians and medical record librarians who, while not touching the patient, nevertheless are involved in their care.[30]

Second, it contains explicit duties to other health professionals on the assumption that such duties enhance the care of the patient and provide for the patient's best interests in an age of technology, specialization, and institutionalization of health care.

Third, it requires sensitivity to the consciences of other health professionals, and the development of a committed institutional environment, an institution with a moral conscience developed through its discussion of values and respect for the values of the professionals who practice therein.

I am under no illusion that any single measure, like an adoption of this code and its concomitant promises, can undo the crisis in moral credibility experienced by the professions and health care delivery in general. Nevertheless, the construction of such a code is suitable for a variety of reasons.

First, it is essential that the public know what commitments the professions will make about their care, especially in areas where traditional oaths and codes have been silent. Then, too, such a construction might reawaken the ideal of service in the ambivalent or more passive members of all the health professions, who for some time now, have come to see their work as a job more than as a commitment. These persons need some reinforcement for their incipient dedication to the patient's well-being. Last, there must be some evidence advanced to the public that health professionals will not dilute their commitments when practicing in for-profit institutions, entrepreneurial private corporations, or some prospective payment plans.

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INTRODUCTION

TEAM DEVELOPMENT ISSUES

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Much of health care team development theory, thus far, has been based on group development models. They generally state that groups go through stages or phases in the course of their development. Some of the most prominent models are the recurring phase model, sequential phase model, and the changing leadership model. Although these models often seem to blend together they have repeated themes: i.e. that groups go through distinct changes as they develop. The three most frequently mentioned are storming/or conflict, norming/ or testing, and performing/ or problem solving. These occur, though not necessarily in that sequence, and can repeat themselves in any sequence. Many models also suggest withdrawal from a strong team leader and greater development of problem solving abilities as the group matures.

Interdisciplinary health care teams as specific types of groups contain unique and powerful variables which influence the team development process in many fascinating and unpredictable ways. The four papers presented today will add to our knowledge of that magic black box known as interdisciplinary health team theory.

The paper of Lyn Clayton will address some effects of training and feedback on team function and development. The second paper, by Michael Farrell, Madeline Schmitt and Gloria Heinemann will address the impact of organizational structure on the development process. A third paper by Thomas Skoloda, Thomas Lantz-Cashman, Karen Peters and Frances McFadden focuses on interprofessional and territorial issues in the early stages of a team's development. The final paper by Clair Johnson also focuses on overlapping roles but in the context of a need for a shared core of technical knowledge.

TRAINING MODEL FOR INCREASING TEAM EXCELLENCE AND EFFICIENCY

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Learning has been defined as changes in behavior that result from experience (LeFrancois 1982). Gagni (1965) refers to the varieties of change called learning. The question we addressed is: Can health care teams be trained to be competent, cost effective, and time efficient?

At the Salt Lake VA Medical Center we are conducting a longitudinal study of team development and training, attempting to answer that question. Our training project is part of a long-term plan of the investigators to study and improve the efficiency and effectiveness of interdisciplinary health care teams. Although teams have a variety of functions, carry them out in many settings, and are not restricted to only the times when all members are physically present and acting together, the focus of this project was on the team's case management meetings. Critical decision making processes are most easily identified and observed at these team meetings since most members are present, they involve a limited amount of time, and they are specifically devoted to a primary activity of health care teams which is the exchange and sharing of information to improve patient care.

Phase one of the long-term plan was completed prior to this project. It consisted of a quantitative and qualitative descriptive study of the decision-making process during the meetings of the same interdisciplinary team reported on in this paper. Several recommendations from that study were made concerning the need for meeting preplanning, structure modification, and proportion of time spent on various activities. The present project represents the second phase of the overall plan, which was to provide additional training and a video recording intervention to help the team achieve the recommendations of the previous study and to develop assessment instruments and strategies which can be used to improve the efficiency of team meetings in many settings.

Our HBHC team is composed of nine members: four nurse practitioners (two males and two females with one of the females acting as the coordinator), one social worker (male), one occupational therapist (female), one physician (male), one dietician (female), and one secretary (female). Most members had been part of the team for at least 18 months. During that time, case management meetings were held twice a week and lasted from one to three hours.

Prior to implementation of the training/education intervention sessions, six case management meetings were video-recorded to provide the baseline data for the pre-assessment period. After completion of five days of directed training, six more case management meetings were video-recorded to provide post-intervention measures. Training intervention included three basic steps.

Step one consisted of two separate team meetings to discuss the team's goals and to arrive at consensus as to what changes the team wanted to make.

Step two was in integral part of the intervention. This two-hour session was devoted to a review of the analysis of the pre-intervention team meetings. Parts of each videotape from the six case management team meetings were content analyzed for both individual team member interactions and group characteristics. After each team member reviewed several graphs illustrating their types and degrees of participation and the overall group functioning, the team was again asked to modify any of their previous goals in light of this statistical feedback. Some goals were modified so that they could be measured by the coding scheme used to analyze the pre-intervention team meetings.

Step three included two one-hour training and discussion sessions directed by the ITTG Coordinator. These sessions focused on how to accomplish the goals that the team had set. It is very important for the team members' own specific goals to be incorporated into intervention goals and strategies. In this project, the interdisciplinary team largely determined the goals and the coordinator then developed the intervention strategy around them. Team members were highly interested in the outcome of the evaluation because it would provide feedback on how successful they had been in making changes that they felt were important and desired.

One of their goals was to lower the percentage of social-emotional, non task oriented aspects of the meetings. They wanted the cases presented succinctly and then a short break between cases. This led to a more careful scrutinizing of the material presented. Another issue analyzed was the hypothesis that a structured discussion group process increases the amount of effective group task activity more than an interactive group process during interdisciplinary team case management meetings.

Structured discussion group process contains the following steps: (a) identifying the facts, (b) stating the objectives for actions, (c) identifying the underlying causes of the problem, (d) generating alternative solutions, (e) choosing the "...best alternatives," (f) identifying actions necessary for implementation of the best alternatives. A facilitator is responsible for assuring that the group avoids accepting an alternative before all the steps are completed. A solution is chosen by general consensus.

One of the most common complaints voiced informally and in the literature about the team concept is the length of meetings and inefficiency of process. This study is an attempt to demonstrate that it is possible to study team interactive patterns and to then implement changes that make the team more efficient, based on the team's specific deficits.

The structured group process is thought to be superior to other group processes in moderately complex situations (White, Dittrich & Long, 1980). Due to the tedious and time consuming nature of this project, a sample of 20 discussions (constituting approximately 20% of the total clients discussed during a three-month period) was selected from the available tapes. These were randomly chosen within the group of new and review cases for each nurse practitioner - representing one of each for the three case managers. The group process involved in each activity was coded according to Bales' (1970) well-formulated technique for classifying and analyzing selected facets of group interaction in the first phase of the study. This instrument is supported by years of research and is based on the assumption that there is an empirical nature to human interaction, namely, that certain actions tend to have related effects on subsequent action. For example, questions usually stimulate answers and answers can result in either positive or negative reactions.

Rates of participation should vary with the problem or intervention being discussed if resources are used adequately. The proportion of a person's questions that are answered will reveal whether there are attempts to tap resources and if the attempts are successful. The number of positive versus negative responses will reveal how conducive the atmosphere is for answering questions.

The content of Bales' categories is primarily designed to make inferences about personality and does not address the decision making process itself. Hoffman's (1979) model focused on decision making but only the solution adoption aspect of it; therefore, Hoffman's model was adapted and used in the second phase.

In order to make the coding process manageable it was necessary to select parts of each videotape for analysis. One patient case was then selected randomly from each of the six pre-intervention case management meetings. The same procedures were followed for the coding of the post-intervention meetings.

All statements by each team member were coded according to four specific categories: (1) statement of the problem; (2) critical; (3) supportive, and (4) non task oriented. Statements of the problem were defined as acts or statements of a descriptive nature which add information to a case review, and are typically neutral (not supportive or critical). Critical statements were those asking critical questions or suggesting alternative courses of action. They were not defined as negative messages. Supportive statements were those expressing agreement or satisfaction with other statements, as well as those which needed clarification in a noncritical way, and those which helped bring closure to the discussion of a particular issue. The non task oriented statements were those not related to the resolution of the problem or issue. Typically, they were socio-emotional expressions related to the relief of tension, mediation, or encouragement. Although these statements can be distractions, Hoffman notes that they are important and they do influence group decision-making.

In order to make the coding process manageable, it was necessary to select parts of each videotape for analysis. The coding procedures required approximately three hours for each hour of tape. Rather than randomly selecting minutes from each tape it was determined that it was more important to analyze the team interaction during the entire discussion of a patient case. This would most likely provide data related to all four coding categories. It was equally important to select videotape segments which included both the presentations of new and review cases and to have different nurse practitioners as the primary case presenters. Given all these considerations, one patient case was then randomly selected from each of the six pre-intervention case management meetings. The same procedures were followed for the coding of the post-intervention meetings. One person did all of the data coding but reliability checks were completed by one of the project consultants. Two 20-minute segments were found to have a 94 percent agreement rating.

For purposes of providing intervention feedback to the team members and for evaluating the impact of the intervention, numerous graphs were prepared on the participation of the individual team members and the group as a whole. Each team member's participation was depicted in five graphs: (1) their percentage of the total group participation and the percentage of their own participation that was; (2) statement of the problem; (3) critical; (4) supportive; and (5) non task oriented. These graphs were used primarily for the intervention purpose of providing feedback to each individual team member. They were encouraged to set goals for their own participation and to determine whether they were successful in accomplishing them after the intervention.

During the pre-intervention period, the team spent an average (mean) of 36 minutes discussing each patient. One new patient case was discussed for 62 minutes and another for 57 minutes. The least amount of time spent on one patient during the baseline period was 13 minutes. This was a review of an ongoing case.

There were easily recognized changes in the amount of time spent on each case after the intervention. The average (mean) amount of time per case dropped from 36 to 20 minutes. This time savings of 16 minutes per case is highly significant particularly when it is multiplied by several cases per meeting and the number of meetings over the course of a month, year, or even more (see Table 1).

TABLE 1

HBHC RESULTS

Time Saved: (used for patient care)
    16 minutes per case
    Average of 8 cases per week
        10 team members = 21 hours and 20 minutes saved per
        week or 89 1/2 patient-care hours saved a month

Potential Hospital-wide Savings
    Average of 20 Health Care teams in hospital
    Average of 1,792 hours that could be saved monthly

During the post-intervention phase, the most time spent on one patient case (new) was 30 minutes and the least amount of time was 11 minutes (review). Not only was there a reduction in the average amount of time per case, but there was less variability in the amount of time spent from one case to another. During the post-assessment meeting with the team, there was consensus that the members were pleased and satisfied with these changes and that the quality of the team meetings was significantly improved. The team reported that the quality of their case management meetings was enhanced as a result of the time reduction because their discussions were focused and directed more toward the care of the patient.

In current days of serious budget restraints, we are searching for ways of being more conservative in utilization of all resources. As we attempt to serve more veterans with our current staff, we must scrutinize the time being spent in non-direct care, and assure that it is time effectively spent.

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APPENDIX

A TRAINING MODEL FOR INCREASING TEAM EXCELLENCE AND EFFICIENCY

STEP ONE: Video recordings are made of several team meetings to provide a baseline. Audio recordings, although not as complete, can be used.

STEP TWO: Goal setting session held.
A - Team members set their goals and arrive at consensus. (Goals can be and often are imposed on a team, with less beneficial results)
B - Decision is reached as to the coding scheme used.

STEP THREE: Intervention planned by facilitator based on team goals.

STEP FOUR: Coding of pre-intervention recordings.

STEP FIVE: Intervention carried out.
Interventions can be feedback sessions, educational, or experiential sessions. Number and length of sessions based on changes to be implemented and time constraints.

STEP SIX: Record the same number of sessions as were made for the pre-intervention phase.

STEP SEVEN: Recordings are again coded using the same methodology.

STEP EIGHT: Comparative analysis made of pre- and post-intervention material and team goals.

STEP NINE: Feedback session with team.

STEP TEN: Follow-up session to re-evaluate goals and progress and set goals for future progress.

ORGANIZATIONAL STRUCTURES OF HEALTH CARE TEAMS: IMPACT ON TEAM DEVELOPMENT AND IMPLICATIONS FOR CONSULTATION

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Introduction

Theories of group development (Tuckman, 1965) imply that a health care team that is unencumbered by organizational constraints will pass through the stages of development more easily than one that is constrained. For the team embedded in the traditional hospital setting, demands from various departments of the hospital, constraints of professional reference groups, and traditional professional roles would all seem to conspire to inhibit development. If this were so, then a team that functions on the periphery of the hospital might be expected to work its way through the difficulties of the early stages of development and reach the stages of smooth functioning more readily than one that is constrained by its bureaucratic environment. If the members have only each other to take into account, they should more readily develop strong cohesion and effective means to fulfill their tasks. It would also follow that consultation designed to facilitate team development should be easier with the more autonomous team. Being more autonomous, they should be more able to implement what they learn.

Our findings from educational consultations with two teams over a two-year period have led us to question this line of reasoning. Contrary to our initial expectations, we found it more difficult to move the more autonomous team to the later states of development than it was to move the less autonomous team.

In this paper, we first discuss our thinking about the stages of team development and about the structural and cultural factors that affect such development. Next we present the quantitative evidence that enabled us to compare the two teams before, immediately after, and six months after consultation. Finally, we discuss our experiences while consulting with the two teams.

Our consultation procedures have been described in a previous paper (Farrell, Schmitt, and Heinemann, 1984). Briefly, the procedures made use of quantitative and qualitative assessments of team properties, feedback workshops, and follow-up measures of the effectiveness of the consultation. We first used videotapes and interviews to gather data that enabled us to assess each team's needs; then we provided each team with a series of four or five workshops tailored to help them learn about their functioning and to progress to the later stages of team development. The workshops were spaced about three weeks apart. The time from initial data gathering to follow-up observations was approximately one year. We worked first with an in-patient, general medical team (IP Team); then, a few months after completing that consultation, we worked with an out-patient, home care team that was based in a hospital (HC Team).

Stages of Team Development

In a previous paper, we presented an attempt to relate our observations of health care teams to theories of group development (Farrell, Heinemann, and Schmitt, 1986). Drawing on observations of teams in a variety of settings, we argued that the stage of team development could be inferred based on the constellation of informal roles present in the team. In Stage I, the Dependency Stage, members are uncertain about professional roles, group process roles, and authority roles. Because they lack commitment to the team and trust in one another, communication is not open. They are likely to seek orientation and guidance from authorities inside and outside the team. The dominant informal role in this stage is likely to be the Superman or Wonderwoman, a member who is seen as particularly competent and who is idealized by other members. Other roles include the Helper, a member who makes considered efforts to please the dominant person; the Scapegoat, a member who is perceived as incompetent and a major source of team problems; and the Clown, a member who uses humor to dispel tension generated by team members' uncertainties.

In Stage II, the Conflict Stage, teams are likely to be polarized in conflict about the exercise of authority. As team members carry out work together, they are likely discover many disagreements about what each member should be doing and about how much control one member, often the physician, should have over other members. Conflicts are likely to be dealt with by means of avoidance, and tensions are likely to be dealt with indirectly. Occasionally, conflicts may erupt in meetings, but they are likely to go unresolved and result in an aftermath of hard feelings.

The dominant informal role during this stage is the Tyrant, a member who is seen as an oppressive authority figure. Usually, but not always, this member is the physician. Members may turn to this person for decisions or conflict resolution, but they are also likely to resent this person's dominance. Conflict results when this dominance is challenged, often by a team member playing the role of Hatchetman. As conflict intensifies, the Hatchetman may become the Lawyer or spokesperson for the discontents of other members. Within the team, several new informal roles may emerge to dispel or contain the growing tension: The Caring Ear or socio-emotional specialist, who spends much time listening to gripes and repairing damaged self-esteem and the Party Host, who attempts to counter growing resistance by bringing food to meetings, staging parties, or in other ways being nice to everyone.

In the later stages of development (State III, Cohesion and Consensus, and Stage IV, Functional Role Relatedness), preoccupation with authority is lessened. Through open discussion, members confront discontent and negotiate a consensus about goals, procedures, and roles. The negotiations result in clarification of ambiguities about authority, professional roles, and members' rights and responsibilities in team meetings. The emergent roles and expectations become the core of the team's culture. Members in this stage express a greater sense of we-ness. The team alternates smoothly through periods of work punctuated by meetings to resolve conflicts as they arise and parties to celebrate accomplishments.

The informal roles likely to be salient at this time include a Coalition of Colleagues, a core group of members who are relatively equal in participation, share a sense of respect and warmth toward one another, and divide the labor and decision-making based on expertise. The former Tyrant, Superman, or Wonderwoman is likely to be a member of the coalition, but he or she is now likely to interact more as a peer. Communication is less likely to be blocked or overloaded with tension.

Structural Factors that Influence Team Development

The Locus of Embeddedness. One structural factor that influences team development is the degree to which team members are embedded (Granovetter, 1985) in either their discipline-specific network or the team network. A member who is more embedded in a discipline-specific network consults frequently with and spends most free time with persons in his or her own discipline and is more closely supervised by discipline-specific authorities. One who is more embedded in the team consults and socializes more with team members and is only loosely supervised by authorities outside of the team. The locus of embeddedness influences the degree to which members adhere to their professional roles and the degree to which they become invested in the team's formal and informal roles.

Prior to consultation, the IP Team members were less embedded in their team network and more embedded in their discipline-specific networks. One factor that contributed to this was that only 3 out of 12 IP Team members were assigned full-time to the team, while other members ranged from 10% to 60% time commitment. Even some of those who were assigned full-time to the team shared offices with other professionals from their own disciplines. Those without full-time assignment had their offices geographically dispersed throughout the hospital.

In contrast, eight out of nine HC Team members were assigned full-time to the team. The ninth member, the physician, had an 80% time commitment to the team. Seven team members shared one large office, while the other two, the physician and the secretary, had offices directly across the hall. Only two team members, the head nurse and the social worker, were likely to interact with any frequency with professionals from their discipline-specific networks outside the team. Since the HC Team's patients were dispersed throughout a large metropolitan area, team members were frequently away from the hospital. Thus, unlike the IP Team, the HC Team members operated on the periphery of the hospital bureaucracy and were more embedded in their team network, in terms of both their time commitment and their proximity to one another.

The degree of embeddedness in discipline-specific or team network was manifest in many ways in the teams. The IP Team members had more loyalty to their own respective disciplines and less loyalty to their team. When confronted with a problem in diagnosis or treatment, team members turned to colleagues outside the team for consultation. Complaints about the team were likely to be shared with these outsiders. For example, during our period of observation the resident physician took complaints about team organization to his supervisor, rather than bringing them to the team. Another manifestation of discipline-specific embeddedness in the IP Team was that members more rigidly adhered to their professional roles and resisted any pressures to take on responsibilities that went beyond their job description.

Being less embedded in their discipline-specific networks, the HC Team members were more likely to channel complaints and consultations back into the team. Since HC Team members were less involved with people outside their team, they were more susceptible to informal pressures from one another. These pressures pulled them into activities that were not expected within their formal, professional roles. For example, the social worker became involved with administrative, record-keeping work, which both he and other members felt was the domain of the head nurse or the physician in his role as medical director. But because of perceived pressing need, the social worker continued to carry out these functions. Likewise, the LPNs took on responsibilities that were normally reserved for RNs, and the physician's and nurse practitioner's roles often overlapped. The lack of strong ties to their own disciplines created a context where role-dedifferentiation was more likely to occur.

The Geographic Location of Patients

Other structural factors besides locus of embeddedness contributed to the differences between the two teams in the dedifferentiation of roles. The IP Team was responsible for 34 patients located in adjacent corridors. Each team member could visit any patient easily. In contrast, the HC Team was responsible for the care of 85 to 100 patients scattered around a large metropolitan area. Each team member was able to visit only three or four patients per day. In a normal cycle of visits, an RN might allow three to six weeks between her visits to a particular patient. However, during this interval, other team members were likely to visit the patient. While alone in the patient's home, each member had to act as the "eyes, ears, and hands" for the others; that is, he or she had to take in information for the other disciplines and sometimes make decisions or provide services that ordinarily would be the responsibility of another discipline. Thus, the physician, acting like a traditional family doctor, might expand his or her role into nursing or social work. The LPN might expand into professional nursing, or the nurse practitioner might expand into medicine. While the lack of embeddedness in the discipline-specific network allowed for dedifferentiation of professional roles, the dispersal of patients and the cycles of patient contact actually encouraged it.

Cultural Factors that Influence Team Development

The Clash of Cultural Models of Authority and Division of Labor. In addition to the structural factors that contributed to differences between the two teams, there were also cultural differences that influenced team development. In contrast to the IP Team, which had clear expectations for the exercise of authority, the HC Team was confronted with uncertainty about the exercise of authority in two key roles - the physician and the head nurse. The HC Team functioned at the edge of the hospital bureaucracy. Their patients had problems that did not require hospitalization; yet, they were sick enough to require monitoring and input of health care team skills - especially those provided by nursing. In the contemporary health care system, nursing has a well-defined model for home health care. The model of the relatively autonomous visiting nurse fits well in the situation. Each nurse on the HC Team had a case load for which she was responsible. However, the roles of the physician and head nurse were less clearly defined. The more specialized medical knowledge and skills of the physician were not required on a regular basis (as they are in a hospital where patients were more acutely ill). Since there was no unit of patients and staff to manage and since it was impossible to maintain contact with all the patients, the role of head nurse was also less clear. The HC Team was confronted with the problem of redefining these roles -sorting out which models of physician, head nurse, and team were appropriate to the work setting.

Confronted with this situation, the physician vacillated between two models for his role - the hospital physician and the family doctor. Drawing on the hospital physician model, he thought he should closely supervise the staff and maintain up-to-date information on all 85 to 100 patients. This led to his decision to have daily meetings at which each team member reported their activities of the previous day to him. Drawing on the family doctor model to define his role, he made house calls to a variety of patients so as to maintain personal contact.

The head nurse also had no clear model to draw on in defining her role. The other RNs conveyed to her that they would like her to take responsibility for some of the day-to-day home visits and care of patients. The social worker indicated that he would like her to take on some of the record-keeping and health insurance work. Drawing on her model of head nurse in the hospital, she felt these functions were outside of her role; yet, she could not clearly define what she should be doing as head nurse in the HC Team setting.

In the midst of this uncertainty, the physician's role became pivotal. The authority associated with the external prestige of this role enabled him to force others on the team to comply with his solutions to problems. For example, because he was the physician, other team members went along with his demand that they meet every morning to discuss patients even though they thought the meetings were redundant. When other team members attempted to resolve their own problems, they would turn to him for authority to back them up. Consequently, the physician's role became both central and problematic due to his lack of definition.

Effects of the Structural and Cultural Differences on Team Development.

The differences in the two teams with respect to embeddedness, location of patients, and clarity about authority roles, created many differences in the types of strains experienced by each team, and resulted in differences in the stage of team development each achieved. The IP Team was still in the Dependency Stage. Lacking a sense of being a team, they had more permeable boundaries. Strangers could come and go at meetings without identifying themselves to the team members. members would sit scattered about a room haphazardly so that it was difficult to say who was a member of the team, who was a student, and who was simply a visitor. In dealing with outside authority, they were dependent and compliant. Their meetings had a very rigid quality with each member in turn presenting the report from his or her discipline. Some members complained that they did not understand the jargon of other disciplines.

On the other hand, the HC Team was intensively embroiled in the Conflict Stage of team development. The seven team members who shared one large office were free to interact with each other in a fluid way; strong coalitions developed within this group. As members became aware of one another's needs, they volunteered or were pressured to bend their professional roles to assist one another. Overloaded with patients, the members were sensitive to whether everyone was doing his or her fair share of work.

The physician, who had a separate office, was not as deeply involved in this network. The heavy load of patients made him anxious about meeting patients' needs. And the expansion of other team members' roles made him anxious about having his responsibilities usurped. At times he would visit patients in the evening, which created feelings among other team members that he was "checking up" on them. At other times, he would delay making decisions by claiming he needed more information. Meetings to keep him informed were loosely organized and frequently broke down into side conversations or dyadic communication between the physician and one other team member. Since the team was less embedded in the hospital bureaucracy, the team members had no authorities outside the team who could be blamed for their problems. Consequently, deep seated feelings of frustration and anger pervaded the relationship to the physician. Members vacillated between begging him for decisions and attacking him for being too dominant.

Comparison of IP and HC Team Functioning

Quantitative Measures. Several of these differences in team functioning are reflected in our measures of team properties. Before beginning a series of workshops designed to help the teams function more effectively, we asked team members in individual interviews to characterize the team as a whole, the relations between team members, and their own roles in terms of role clarity, role overload, and styles of resolving conflicts. To measure changes in properties of the team, we asked members to fill out two questionnaires before, immediately after, and six months after completing the workshops: the Moos' Group Environment Scale (Moos et al, 1975) and Bales' SYMLOG Scales (Bales and Cohen, 1979). The latter scales enabled us to measure changes in the informal role structure of the teams.

Similarities between the Teams. Looking at the Moos scales, we see that initially both teams reported relatively high degrees of cohesion (Table 1). They responded positively to such items as, "There is a feeling of unity and cohesion in this group." However, responses to this scale may have been colored by the same social desirability factors that lead married couples to report satisfaction with their marriages.

Not surprisingly, both teams felt positively about their task performance. In spite of any interpersonal or administrative difficulties, teams usually strive to do well at their basic tasks. On the Clear Objectives item, which ranges from a high of 5 to a low of 1, the average member's rating in both teams indicated that they felt the task objectives of their teams were fairly clear (Table 2). Another indicator of their perceptions of task effectiveness are the reports on how well members cooperated to get the work done (Table 2). Both teams scored high on this scale.

Consistent with these reports of task effectiveness, we found that on the

Moos scales both teams also scored high on Task Orientation (Table 1), which indicates agreement with items like, the team helps its members "make practical decisions" and "learn new skills." However,both teams also scored relatively low on Innovativeness (Table 1); each agreed that "This team has a set way of doing things" and, "The team usually follows about the same pattern in every meeting."

TABLE 1
Mean Scores on Moos Group Environment Scales

	IP Team			HC Team		
	Before	After	6mos	Before	After	6mos
Cohesion	6.1	7.0	8.1	7.1	7.3	6.3
Leader Structure	6.2	6.4	5.7	4.2	6.4	4.9
Expression	4.7	3.8	4.3	5.8	6.6	6.4
Independence	5.7	5.7	5.9	4.4	7.1	5.8
Task Orientation	7.7	7.6	8.0	7.2	7.6	6.3
Self Discovery	1.5	2.1	2.5	4.5	4.8	5.3
Anger	3.4	3.6	3.4	6.7	6.3	7.0
Order and Org.	5.9	6.0	7.3	3.1	5.3	4.4
Leader Centered	3.6	3.3	2.6	5.7	5.5	5.6
Innovativeness	3.9	3.5	3.3	3.5	4.0	3.1

TABLE 2
Mean Scores on Initial Interviews

	IP Team	HC Team
	$\bar{X}$ (sd)	$\bar{X}$ (sd)
Clear Objections	3.60 (0.49)	3.72 (0.71)
Role Clarity	3.55 (1.19)	3.33 (1.33)
Role Conflict	2.30 (1.19)	2.89 (1.45)
Individuals Valued	3.50 (1.12)	2.83 (1.52)
Decision Clarity	3.20 (0.87)	3.28 (1.18)
Trust, Recognition	3.65 (0.90)	3.30 (1.41)
Cooperation	4.05 (0.47)	4.17 (0.58)

Differences between the Teams. We being to see initial differences when we look at items that focus on group structure and individual member's experience of being in the group. In comparison to the IP Team, the HC Team reported less Order and Organization (Table 1). HC Team members were less likely to report that "Activities of the group are carefully planned," and more likely to report that, "It is sometimes hard to tell just what is going on in this team." IP Team members, who were more embedded in their discipline-specific networks, reported that their roles were clearly defined more so than did the HC Team members (Table 2). Not only is the mean for Role Clarity on the HC Team lower, but the variance is greater, which indicates that some members felt their roles were quite clear, while other felt they were not clear at all. Looking at individual responses, we find that the head nurse, who had just begun to work with the team, was particularly uncertain about her role. This uncertainty did not resolve itself over time. The other HC Team members who were most uncertain about their roles were the physician and LPN.

Reflecting the role dedifferentiation, the members of HC Team also reported more role conflict and overload than did the members of the IP Team (Table 2). In their relations to one another, HC Team members reported less of a sense that the value of each member's contribution was appreciated or that members were trusted and recognized for their contributions. Again, the variance on these items indicates wide differences in how these dimensions were perceived in the HC Team. For example, while the physician saw the team in a positive light, the LPNs saw it in a more negative light.

This sense of ambiguity may not be all bad, because it sets the stage for more Self-Discovery (Table 1). HC Team members were more likely to agree that, "In this team members are learning to depend on themselves." The lack of order was also associated with greater Expressiveness in the HC Team (Table 1); while the orderliness of the IP Team was associated with a sense of constraint. HC Team members agreed that, "There is a lot of spontaneous discussion in this team," while IP Team members were likely to say that, "Members tend to hide their feelings from one another." However, at times this spontaneity in the HC Team erupted into overt anger. The HC Team, agreeing with items like, "People in this team sometimes yell at each other," and "Members often gripe," scored higher than the IP Team on Tolerance for Anger and Aggression (Table 1).

In addition to these differences in the atmospheres of the two teams, the HC Team reported less of a sense of support from the leader (Leader Structure, Table 1) than the IP Team. HC Team members disagreed with such items as, "The leader goes out of his way to help members," and "Members can count on the leader to help them out of trouble." Even though the HC Team members did not feel the leader provided support or structure to the team, they nevertheless felt that the leader dominated the team (Leader Centered, Table 1). They claimed that, "The leader has much more influence in the group than the other members do," and "The leader often tells other members how to do things." This dominance also became apparent when we compared the two teams on their styles of resolving conflict. While the IP Team was likely to settle conflicts by avoidance or compromise, the HC Team was more likely to settle them by leader fiat.

Authority issues for the IP Team were focused on persons outside the boundaries of the immediate team. Their complaints about authority centered around the constraints and impositions of the heads of services within the hospital bureaucracy. The HC Team, being more autonomous and less imbedded in the hospital bureaucracy, focused authority issues on the physician inside the team.

In addition to answering questions about their perceptions of their teams, members were asked to rate themselves and other team members using Bales SYMLOG adjective checklist. SYMLOG enabled us to locate each member in a three dimensional space. The results of this analysis were used to assess the informal role structure of the team. The dimensions are:

Prominence (Up-Down) - How assertive or active members are in the team;

Sociability (Positive-Negative) - How warm or supportive members are;

Task versus Expressiveness (Forward-Backward) - How useful members are at logical, problem-solving versus how much joking, story-telling, or other expressive activity they show.

In the SYMLOG diagrams (Figures 1-6), Prominence is indicated by the size of the circle drawn to represent each member. Sociability is represented by the position of the circle on the Positive-Negative dimension. Task versus Expressiveness is indicated by the position on the Forward-Backward dimension.

In the initial observation the bulk of the IP Team clustered in the Positive quadrant (Figure 1), whereas two members were seen as different from the others. One of the isolated members, the clinical nurse specialist (CNS), who was an "outside" consultant to the team, was seen as assertive, task-oriented, and less positive; but, since she lacked any legitimated authority, her assertive task-orientation made her a candidate for the Wonderwoman role rather than the Tyrant. The other isolate, the physical therapist (PT), was seen as more negative, less task-oriented, and less assertive than most members. This role resembles that of the Scapegoat. The physician (MD) in the IP team was located in the center of the group - prominent, and task-oriented, but also quite positive. The head nurse (HN) was the Caring Ear in this team. Also, in the IP Team, the social worker (SW) was a prominent, expressive member. In sociometric ratings, he was the best liked member. His warmth and joking behavior made him a candidate for the Clown role.

Superficially, the HC Team resembled the IP Team. The HC Team's ratings prior to consultation show that the physician (MD), like the clinical nurse specialist in the IP Team, was seen as relatively prominent and negative compared to other members (Figure 4). However, because of his authority in the team, he dominated the group, and his informal role resembled the Tyrant. The head nurse (HN) and the nurse practitioner (NP) were also relatively prominent, but they were seen as more positive and appeared closer to other team members. The nurse practitioner sometimes played the hatchetman or Lawyer for other members and argued their cases to the physician. The secretary (SEC) was the most positive member. In our observations she played the part of the Caring Ear; her office was the place where people went to gripe and receive sympathy. The social worker (SW) was seen as the least task-oriented and was not very assertive. As a group, the team was polarized, with the physician and the social worker each being outside the inner circle. One thing to note in comparing these diagrams is that the difference in the sizes of the circles is greater in the HC Team. This difference between teams in the variances on the Prominence dimension indicates more initial equality of participation in the IP Team than in the HC Team.

Results of Consultation

Looking at the Moos scale scores, we see that, immediately after consultation, members of both teams reported more Self-Discovery, and both teams became slightly more cohesive (Table 1). But six months later the IP Team continued to get closer, while the HC Team fell back to a lower level Task Orientation, Order and Organization, Leader Structure, and Member Independence (Table 1). All initially improved for the HC Team, then the scores reverted back toward pre-consultation levels in the six month follow-up observation. Tolerance for Anger (Table 1) fell slightly, then rose to even higher levels at the six month post-consultation observation.

These changes are reflected in the SYMLOG ratings. In observation two (Figure 2) the IP Team had moved closer together and the range on the Prominence dimension had declined. Only the social worker stood out in his Clown role. By observation three (Figure 3), six months later, the IP Team resembled the Coalition of Colleagues, with relatively equal participation of members whose behaviors clustered in the Positive Forward quadrant.

Initially, the HC Team seemed headed in the same direction (Figure 5). The two isolates, the physician and the social worker, moved closer to other members. Even though the team lost its Caring Ear during this period (the secretary moved to another unit), members reported positive behavior from almost everyone. But by the time of the six month follow-up, the HC Team was in trouble again (Figure 6). The physician had drifted back toward the negative direction, and he was joined by the Head Nurse. The Social Worker was seen as more task-oriented but was still relatively isolated. The nurse practitioner, sometimes playing the role of Hatchetman or Lawyer in voicing members' complaints, stood between the team and the authority figures. A new secretary was totally isolated and seemed to be in the Scapegoat role. The range on the Prominence dimension increased once again.

Implications for Consultation

We have argued that the IP Team members were more embedded in their own discipline-specific networks and less embedded in the team network. This situation contributed to their being in the Dependency Stage of group development prior to consultation. The members were more rigidly committed to their professional roles, and they lacked strong commitment to one another. The constraints of traditional hospital roles and the organization of their work setting reinforced this role differentiation. There was less a sense of them being a bounded group and more of a sense of them being a loose confederation of professionals.

In some ways this situation worked to our favor in consulting with them. Because the boundaries of the team were less consolidated, it was relatively easy for us to gain acceptance by the team. Because of their dependent orientation toward authority, they were extremely compliant with our workshop procedures, which required that they meet in a videotaping room far from their unit and that they fill out several questionnaires. For the most part, they readily adapted changes that we suggested for organizing their meetings and relating to one another.

The major objective of our consultation became to move the members closer together. We focused on making members more aware of one another's competencies and allowing them to be more open and trusting of one another. We encouraged them to sharpen the boundaries between their core team and outsiders.

One problem with this team was helping it to increase its autonomy as a team and discouraging it from becoming dependent upon us. In the workshops, we sometimes found it necessary to hold back comments so that the team would discover the resources among their own members and so they themselves would develop skill at diagnosing and suggesting changes in their team.

In contrast to the relatively open boundaries of the IP Team, the boundaries between insiders and outsiders were much more difficult to penetrate in the HC Team. Although urged to seek consultation for their problems, they resisted, until a major confrontation in the team forced the issue. Even after they had agreed to participate in the workshops, the first meeting had to be rescheduled several times. Once we gained entry, we found it was still very difficult to break the momentum of their own processes. We came to each meeting with an agenda and soon found ourselves derailed or bogged down. When they were not arguing among themselves, they were trying to pull us in on one side of a conflict or the other.

Our first objective in consulting with this team was to gain the trust of each member of the team. One way we did this was by going out with them as they made home visits and listening carefully to each member's history and analysis of the group dynamics. We conveyed to them that we had no one member's interest as our goal, but rather our goal was to help the team learn and change in ways that would benefit everyone. We worked at helping them learn an analytic framework that transcended the more mundane questions of who was right or who was wrong about some particular issue.

After gaining entry, in contrast to the problems of moving the IP Team members closer together, our problem with this team was more one of pulling them further apart. In some ways, they resembled a family with children in late adolescence - one that Bowen (1978) was characterized as an undifferentiated ego mass. Those with authority were reluctant to let go even when it was appropriate. Those with less authority felt compelled to test and challenge those with more. The informal pressures had pulled almost all members somewhat out of their professional roles into someone else's territory. Like many groups in the Conflict Stage, exaggerated stereotyping and other signs of projection and introjection were common (Wells, 1980).

In attempting to help them pull further apart, we worked first on bringing structure and order to meetings. Then we worked on sharpening members' awareness of the pressures pulling them out of their professional roles and encouraged them to sharpen the boundaries between professions. Finally, we worked on gaining consensus about the appropriate and inappropriate uses of authority by the physician, head nurse, and nurse practitioner.

As the data show, the strategy has not yet been successful. Teams that develop this degree of intensity of involvement with one another have more difficulty changing. The relative autonomy of the HC Team freed it to get more involved in the Conflict Stage, and the informal roles of this stage were deeply entrenched. The IP Team readily set aside the informal roles of the Dependency Stage, but the HC Team could not easily shift out of the informal roles of the Conflict Stage. The autonomy of the HC team also made resolution of authority issues more difficult. Whereas the IP Team found problematic authority figures outside the team during their Conflict Stage, the HC Team focused on their own members. The lack of organizational constraints enabled them to develop more deeply layered resentments which were more difficult to resolve through consultation.

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FIGURE 1
In-patient Team 1

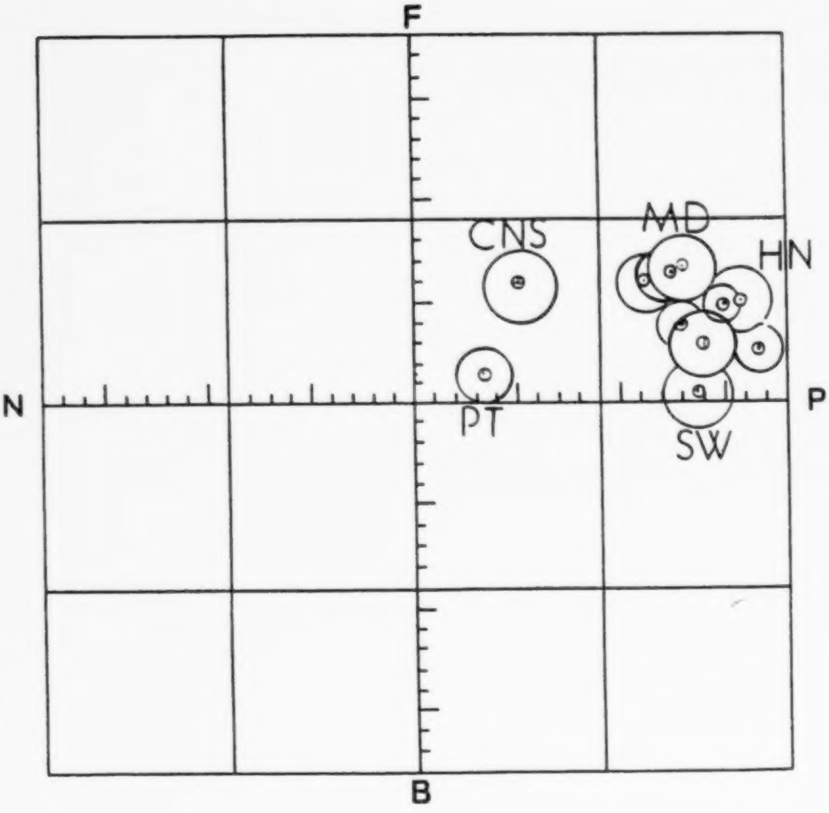


FIGURE 2
In-patient Team 2

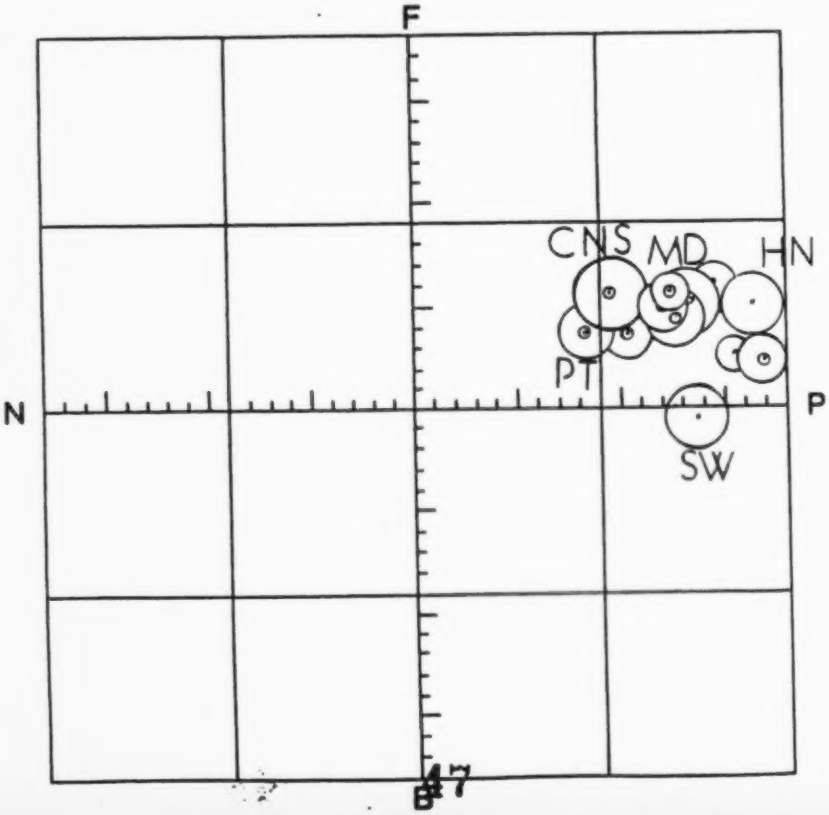


FIGURE 3
In-patient Team 3

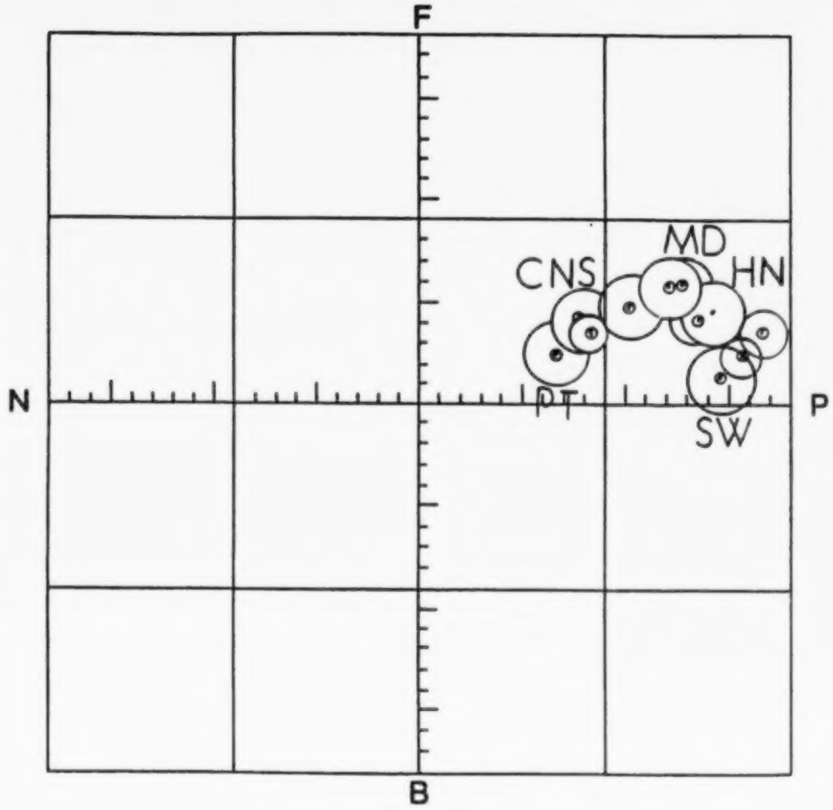


FIGURE 4
Home Care Team 1

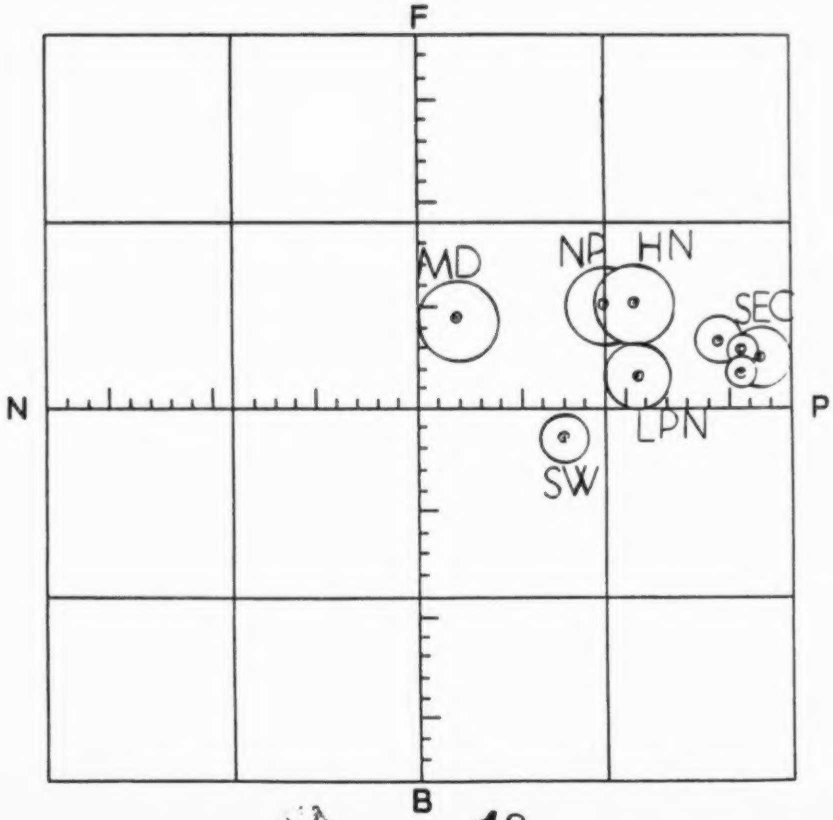


FIGURE 5
Home Care Team 2

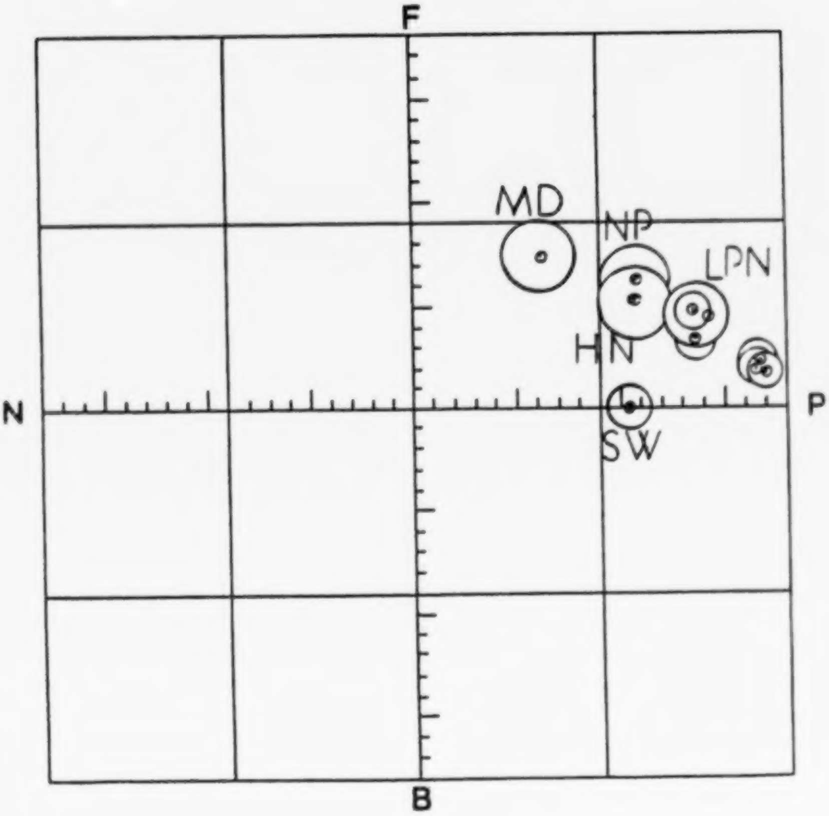
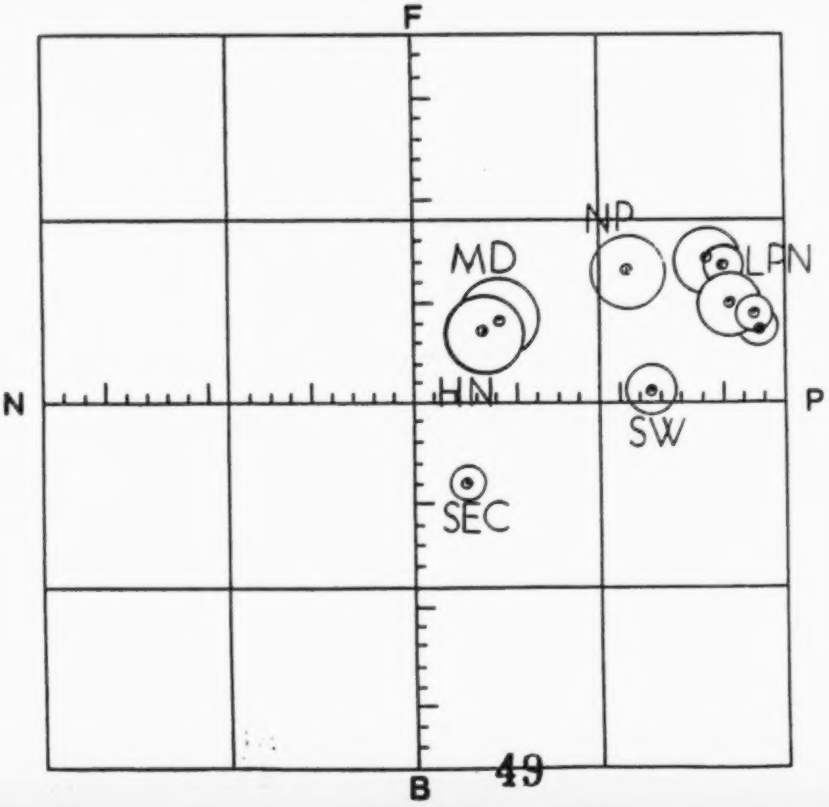


FIGURE 6
Home Care Team 3



ESTABLISHMENT OF AN INTERDISCIPLINARY COGNITIVE REHABILITATION PROGRAM FOR ELDERLY NURSING HOME PATIENTS

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The present paper focuses on some of the team issues encountered when establishing an interdisciplinary program to provide Cognitive Rehabilitation to elderly patients in a large VA Neuropsychiatric Hospital. Establishment and implementation of this program required the coordination and cooperation of representatives from at least four major services within the hospital: Nursing, Rehabilitation Medicine, Psychology, and Social Work. Several issues arose which severely affected the implementation and integrity of the program. Successful implementation of the program required the resolution of these issues and the present paper will describe the procedures followed to resolve these problems. Several significant, but hidden issues also contributed to problems in implementation of this program. The issues uncovered will be described and discussed as potential factors involved in all Interdisciplinary teams. The experiences of the Interdisciplinary Cognitive Rehabilitation Program may help other professionals to identify and clarify underlying roadblocks to interdisciplinary program implementation.

The development and implementation of a new program and the application of that program to a novel population of patients resulted in significant issues for the functioning of an Interdisciplinary Treatment team. The program is called Cognitive Rehabilitation and is a relatively new development in the assessment and treatment of patients with injury to the brain. The new population is elderly Nursing Home patients. From its inception, this program was conceived as an Interdisciplinary effort and the emphasis of the present paper is on the issues that arose in attempting to integrate staff from different professional disciplines into the program.

Many of the papers delivered at the Annual Conferences on Interdisciplinary Health Teams are concerned with the functioning and description of Interdisciplinary teams from a theoretical or formal basis. The present paper is not theoretically oriented, but is based on the experiences and impressions of the primary team members themselves. It is hoped that this grassroots description will illuminate some of the issues encountered in this type of program and will describe the practical solutions attempted to solve these problems.

Description of Cognitive Rehabilitation

Cognitive Rehabilitation is a term given to a group of procedures used to improve the cognitive (i.e., perceptual and intellectual) abilities of patients. As originally conceived, Cognitive Rehabilitation was designed to maximize the rehabilitation potential of younger closed head injury patients and the treatment was an intensive program instituted while the patient was in a Rehabilitation setting. Prior to the implementation of this Cognitive approach, most of the rehabilitation effort for closed head injury patients had focused on Physical and Occupational therapy, in which emphasis was placed on improving muscular control and regaining muscle function. Thus, the rehabilitation effort placed stress on physical exercises, such as walking and relearning fine motor skills.

Neuropsychologists working with brain injured patients were often frustrated with the limitations of their treatment methods. Much of the emphasis in Neuropsychology was on assessment and the development of tests to determine which areas of the brain were damaged based on functional abilities. Diagnosis and localization of injury were the primary functions of Neuropsychologists. Neuropsychological reports often ended with statements confirming neurologic diagnoses or clarifying the specific functions affected by particular brain injuries.

Several pioneers including Yehuda Ben-Yishay (1971), Odie Bracy (1984), Leonard Diller (1976, 1981), Rosamund Gianutsos (1980), and William Lynch (1984) began working on improved ways of measuring cognitive deficits and therapeutic techniques to overcome these deficits. As Odie Bracy, the originator and editor of the journal Cognitive Rehabilitation, has stated, brain injured individuals are unique in the particular patterns of their losses and strengths, and cognitive factors affected often include:

1. Language skills
2. Memory
3. Visual-spatial skills
4. Organizational abilities, and
5. Intellectual skills.

Bracy has delineated more clearly some of the specific tasks which are building blocks for more complex intellectual functions and has suggested that treatment aimed at improving these specific functions is a reasonable goal for neuropsychology. Some of the specific skills or building blocks which were targeted for treatment were:

1. Monitoring sensory input
2. Selectively attending to stimuli
3. Maintaining attention
4. Discriminating stimulus attributes
5. Initiating responses
6. Inhibiting other responses
7. Making differential responses
8. Generalizing stimulus properties
9. Generalizing responses

Cognitive Rehabilitation has received considerable interest from professionals and appears to make the advent of a strong aspect of therapeutic activities for Neuropsychologists. The viability of this approach is demonstrated by the fact that the October, 1986 issue of Psychology Today included a description of Cognitive Rehabilitation and its potential utility.

Within the specific tools and techniques utilized by Neuropsychologists providing Cognitive Rehabilitation, the personal computer proved to be one of the most useful tools. The computer can be used to improve specific cognitive skills because of its ability to:

1. Present stimuli in easily manipulated ways
2. Time events automatically
3. Record responses accurately
4. Give immediate or delayed feedback
5. Change the complexity of tasks depending upon the responses given, and
6. Work tirelessly for long periods of time. In addition, programs can be designed on which patients can work at home or in their spare time in order to maximize the effect of rehabilitation.

Cognitive Rehabilitation programs have been instituted in many Rehabilitation Hospitals and have been used primarily with younger patients with closed head injuries. More recently the techniques employed have begun to be employed with older Stroke patients (Gordon & Diller, 1986). Awareness of these techniques encouraged the Psychology staff at the Veterans Administration Medical Center, Coatesville, PA to implement a Cognitive Rehabilitation program for older brain damaged patients in a Nursing Home setting.

What does this have to do with developing an Inter- disciplinary program? Well, several factors resulted in the integration of this program into the Interdisciplinary Team concept.

Factors Leading to the Development of an Interdisciplinary Cognitive Rehabilitation Program

1. Increased Number of Patients with Brain Injury Problems:

Due to the demographics of the population in the United States, the Veterans Administration is being faced with the prospect of providing care to a large number of elderly veterans. The increase in the number of older veterans being treated also resulted in increased numbers of patients with Cognitive deficits related to Cerebrovascular Accidents, Dementia, or Organic Brain Disorders.

2. Availability of Funds:

The second factor was that funds became available for new program initiatives. A need for appropriate treatment facilities for these patients translated into the construction of new Nursing Home Units. The building of a new Nursing Home also brought additional seed funds to establish new programs. Thus, the time was right to submit a request for funds and equipment to initiate a Cognitive Rehabilitation program in the Nursing Home.

3. VA Emphasis on Interdisciplinary Treatment Teams for Geriatric Patients:

The third and final factor leading to the development of an Interdisciplinary program was the fact that the V. A. recognized the need to train professionals to work with the elderly, and that the problems of the elderly included multiple factors which often spanned several professional disciplines. This recognition was translated into the development of models to train interdisciplinary teams to work with the elderly. Thus, the VA developed a program called Interdisciplinary Team Training in Geriatrics (ITTG) and instituted that program in several VA Medical Centers (Feazell, 1983). The ITTG program provided the vehicle for discussion among the various disciplines already involved in the Interdisciplinary Team effort. This combination of factors described above resulted in the development of an Interdisciplinary Cognitive Rehabilitation Program in which the team consisted of members of Psychology, Nursing, Social Work, Occupational Therapy, and Educational Therapy.

Problems Encountered

The implementation of a new program and the need for disciplines to integrate their services resulted in several problems. Several other authors (Bottom, 1980; Lowe & Herranen, 1978) have described similar problems to the implementation of Interdisciplinary teams. These problems included: Territorial issues, power and control issues, and personality factors. Tuckman (1965) has described four stages of small group development which several other authors have verified and applied to the development of Interdisciplinary teams. These stages include: Stage 1-Testing and Dependency; State 2-Conflict; Stage 3-Cohesion and Consensus; and Stage 4-Functional Role Relatedness. Within these stages of team development, we noted that there were interdepartmental power issues as well as individual issues. The formal procedure of the Veterans Administration for the implementation of new programs provided a viable framework for working through these issues. Territorial issues arose quickly. There were a number of reasons for these territorial issues besides the ones usually stated in the building of teams. Some of the other issues involved recognition and advancement, power and control issues, and acquisition of resources. Some of these issues are often seen on teams but others were unique to our situation.

Problem 1: Lack of Familiarity with Services Provided by Other Disciplines

One problem which has faced many attempts to institute interdisciplinary teams is the lack of understanding of the roles and services provided by members of different professional disciplines. This problem plagued our initial attempts to coordinate the program as each staff member was concerned about protecting the "turf" of that discipline. These problems occurred during Stage 1 and lead the team into the conflicts of Stage 2 of Team Development (Tuckman, 1965).

Solution 1:

The solution to this problem occurred in several stages. First, during the planning meetings for the program, each discipline was scheduled to present information about their service to the team and to demonstrate specific assessment procedures. As this approach continued, it appeared that individual team members became less rigid and more accepting of the approaches used by the other services. As a Psychologist, I was often intrigued by the assessment and treatment techniques of the Occupational Therapist, but was concerned with the lack of control and ability to replicate these techniques. These differences led to discussions of the values and differences in training of each professional discipline. Whereas, Psychologists were often concerned with strict measurement and control issues, the Occupational Therapists were more interested in developing functional programs for each individual patient. These differences often reflected educational backgrounds which emphasized scientific training compared to education which emphasized clinical training. As these issues were discussed, it appeared that team members were more able to recognize the strengths of other disciplines and acknowledged both the strengths and weaknesses of their own discipline's approach. After those initial presentations, the individual team members organized a welcoming luncheon in which the new students and interns were oriented to the Interdisciplinary team approach and the various preceptors from each service described their educational and clinical training. Students also presented their training experiences and helped to keep staff updated on newer trends in training even within their own discipline. These educational sessions seemed to decrease the conflicts within the team and helped each member gain respect for the expertise of other disciplines. An example of this new appreciation occurred each time someone recognized how the treatment that was being provided by that service could integrate with the treatment being provided by another service. These insights seems to occur more often as time went on.

Problem 2: Affiliation with Service Rather Than Team

The next problem encountered had to do with the team member's affiliation with their own service rather than the team. Power struggles and control issues became obvious and team members frequently retreated to statements that certain approaches would have to be checked out with the Service chief prior to decision making. Several factors influenced this problem. The logistic placement of team members seemed to be a significant issue. Those team members whose offices and work sites were further removed from the service and in closer proximity to the offices of the other team members seemed to affiliate more closely with the team than with their service. Thus, the team located in the Nursing Home which was physically separated from the hospital seemed to have greater affiliation to the team than to their own service.

Solution 2:

Team meetings were held in the Nursing Home Unit and two teams were formed to correspond to the logistic arrangements of the hospital. These approaches seemed to help solidify the teams by decreasing the feeling that team members were scattered throughout the hospital. In addition, trips were scheduled to visit other Rehabilitation Hospitals with similar programs. Following the role models of these existing programs and the fact that the teams made these trips together also seemed to help solidify the team concept and breakdown interdepartmental barriers.

Problem 3: Ambiguity in the Definition of a New Program

The fact that this was a new program and that the treatment was somewhat untested led to ambiguity and role confusion. This ambiguity wasn't only a local problem but also became evident at the 1986 Annual Convention of the American Psychological Association, Washington, DC At that convention, a meeting of Neuropsychologists involved discussion of the field of Cognitive Rehabilitation and qualifications needed for practitioners. It was noted that several individuals had begun to call themselves "Cognitive Rehabilitation Technicians," with emphasis on the technology involved rather than an appreciation of assessment and neural structures. There was serious concern voiced that this approach would become paramount and taken out of perspective. Several psychologists felt that the term itself resulted in confusion and suggested that "Cognitive Rehabilitation" be abolished in favor of "Clinical Neuropsychology." This issue was also evident within our attempt to implement this program and resulted in one of the barriers to effective program development and implementation.

Solution 3:

Utilizing the formal structure of the VA, a program proposal was written and the various aspects of the program were delineated. The purpose of the program was clarified, the program components were defined, and responsibilities and procedures were clearly spelled out. The development of this document was a team effort and conflicts were worked out as the document was refined. The final proposal was submitted to all Clinical Service Chiefs for review and comment. Comments and issues were resolved at the next level of command and the document was presented to the Clinical Executive Board for approval. With the stamp of approval of the individual service chiefs and the hospital administration, the program had official acceptance. This procedure was time consuming and lengthy but helped to clarify issues which could have destroyed the program if they had not been addressed.

Problem 4: Ulterior Motives

One of the unique issues leading to program fragmentation was that the program was seen as a means of justifying acquisition of new equipment, specifically, computer equipment. At that time, it was very difficult to obtain computers in the VA and any justification that was a "hot" issue was seen as a viable means to an end. As such, the program was used to justify the acquisition of equipment but the team became the vehicle for recommending required equipment. In this way, individuals had to justify their requests to the other services and control of this issue ceased to be a problem.

Some individual issues continued to be stumbling blocks. One of these issues was that some individual staff members continued to view the program as a re-description of techniques they were already offering. Conflict occurred regarding the specific services and planning and team meetings appeared to have much more obvious underlying issues of territorial invasions, bruised egos, and passive resistance. Attempts to discuss the underlying issues frequently met with denial of resistance and/or ulterior motives. Thus, all issues were not easily resolved and some problems remain for team resolution.

These issues seemed to be more resistant to resolution and require considerable commitment on the part of the team. Some role confusion continues to be a problem in settings where disciplines have more freedom to establish their own goals and roles. The best solution to these problems appeared to reside in Tuckman's 4th stage of Team Development - Functional Role Relatedness. What this meant for our team was that the team began to focus on specific patient problems. As these problems were clarified, specific and objective goals were established and each discipline could define and describe the way in which they would operate to reach these goals. This emphasis on objective patient problems enabled even conflicted team members to work together and to become aware of their own contribution to the resolution of individual problems.

Conclusions

Some of the better solutions for the resolution of Interdisciplinary Team problems occurred by using policies already existing in the structure of the bureaucracy. Although, many see the formal structure and requirements of the bureaucracy as inhibitive, it does have positive factors. The requirement of developing a formal proposal and circulating that proposal to each major clinical service was one of the most useful procedures for team integration. In developing the Cognitive Rehabilitation program, VA policy required that a formal proposal be written in order for this program to be accepted as an official program. A memorandum was drafted which described the program and outlined policy, responsibilities, and procedures. The team met to draft this proposal and discuss each issue. Inter-service problems surfaced and had to be discussed and resolved before progress could be made. Although this procedure involved considerable time, it did result in the production of a document agreed to by all members of the team and became a binding document.

It was also very helpful for the team to get together as a unit and visit other facilities where similar programs were in place and discuss the procedures of these programs. These visits proved that the issues we were encountering had also been encountered in other facilities and their attempts to alleviate these problems helped us to clarify our approach. This approach helped to clarify the nature of the program and to delineate the contributions of specific team members.

The next useful suggestion involved the meetings held to present and review the assessment procedures used by each of the various services. In this way, each discipline became more familiar with the techniques and skills of the other disciplines, and staff were often surprised at the sophistication and novelty of the techniques used by others.

The decision to establish two teams to compliment the logistic placement of the members also increased commitment to the teams. One team was responsible for the assessment and treatment of patients within the Medical Center itself and the other team focused on the original target group of patients within the Nursing Home.

Finally, the focus on specific patient problems allowed us to use our techniques to address the problems and in this way the different services learned to interact and work together to improve a specific situation.

It is hoped that this practical description of the development of a specific Interdisciplinary Program will be useful to others attempting to establish such programs.

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NUTRITION SUPPORT PRACTICE: A STUDY OF FACTORS INHERENT IN THE DELIVERY OF NUTRITION SUPPORT SERVICES

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Introduction

The national trend during the past decade has been toward the formation of nutrition support teams consisting chiefly of clinicians in medicine, pharmacy, nursing, and dietetics[1]. Currently, efforts are being made to address nutrition support functions of these clinicians. Hoying[2] describes the nurse role as encompassing the responsibilities of maintaining quality patient care, educating the nursing staff, assisting with central venous catheter placement and educating the patient and family. She further defines the nurse's managerial responsibilities to include planning, implementing, and monitoring.

The American Society of Hospital Pharmacists[3] proposed a residency program which included the following areas of competencies: interviewing, nutrition and metabolic assessment, communication and public speaking, formula and feeding development, monitoring patient progress, educating patients and families, conducting in-service education of professional staff, comparing infusing devices, interacting with the team, and outlining the organizational structure for a nutrition support service.

Jones, Bonner, and Stiff[4] asked 225 nutrition support dietitians to identify functions for which they should be responsible. Over 80 percent of the sample indicated they should either always or usually assess energy and protein needs, coordinate transitional feedings, advise on nutrition standards, monitor food intake, evaluate nutrition support, identify need for change in care, prescribe enteral formulas, identify and interpret nutritional deficiency, determine mode of therapy, obtain food tolerances and preferences, participate in research, formulate special enteral formulas, take and interpret anthropometric measurements, determine composition of parenteral solutions, relate drugs to nutrition care, and order laboratory tests to monitor nutrition therapy.

Dietitian functions were also studied by the author for the purpose of developing a postgraduate training program for nutrition support dietitians. At the conclusion of this study[5] it was hypothesized that discipline-specific functions are not detached behaviors, rather, they form a comprehensive pattern or structure within which discipline-specific nutrition support functions are located.

In the literature, physician clinicians tend to delineate the interdisciplinary contributions of team members. For example, Dudrick and co-workers[6] speak of "interdisciplinary scientists and clinicians (who) will contribute to the vital areas of clinical biochemistry, metabolism, enteral nutrition and total parenteral nutrition." In addition, they do not distinguish between the practical knowledge needed by physicians and that needed by every member of the team, thus implying an inter-correlation of functions.

Purpose

When the literature related to nutrition support is combined, similarities between disciplines are striking and serve to reinforce the hypothesis of inter-correlation. The purpose of this study was to explore this hypothesis in relation to the roles of the dietitian, physician, and team. The "team" was defined as consisting of a physician, pharmacist nurse, and dietitian.

High inter-correlations between the three sets of role functions would suggest an underlying structure which identifies important dimensions of nutrition support practice. It is important to identify structure because structure provides an integrated perspective which is necessary for all intelligent decisions regarding the major components of practice. Structure serves to identify what should be included, as well as excluded from a curriculum. The comprehensive structure, or the whole, of a new practice specialty such as nutrition support is not readily visible during its initial growth and development. Therefore, identifying the whole is the first step in delineating and validating the contribution of each component part[7].

Method

A questionnaire was mailed to 880 dietitians and physicians identified in a national listing of nutrition support teams[8]. Two hundred and sixty-nine, or 31 percent of the population responded, 170 dietitians and 84 physicians. Therefore, 63 percent of the sample group were dietitians and 31 percent, physicians.

Those surveyed were asked to respond to a questionnaire which described nutrition support functions as reported in the literature[9,10,11] and validated by a panel of nutrition support physicians and dietitians. Respondents were asked to indicate who on the team, whether the physician, dietitian, or the team performed each of 58 functions described on the questionnaire. Responses were converted to scores and subjected to factor analysis. The study is limited by the fact that the data collection instrument was designed to study dietitian and team functions. There was no attempt to study specialized physician, nurse, or pharmacist functions and perceptions are limited to those of dietitians and physicians only.

Analysis of Data

The factor analysis technique was used to treat the data in order to explore the structure of inter-correlations among answers to role questions. A correlation matrix was computed for how the total sample responded in terms of physician role, dietitian role, and team role. Scores were factored by principal components solution with a Varimax rotation of each of the three matrices[12].

The inter-correlations among function statements within each matrix were subjected to inductive analysis in order to identify patterns, themes, or categories of analysis emerging from the data. Two criteria served to label the factors: a) statements loaded 0.40 or higher on the factor for at least two sets of role functions; and b) there was a conceptual fit between statements loading on the factor and descriptive dimensions of nutrition support practice as identified in the literature.

Results

Nutrition support practice was distinguished by nine factors. Five factors related to the patient, three to the practitioners, and one to the formula or feeding. A further component of practice is education. However, since over 90 percent of the sample reported that each specialty educated its own practitioners and students, these data were not factor analyzed.

Patient Factors

Five configurations of role functions related to the patient are presented on Table 1. Factor loadings indicate:

1. Patient input and output, as well as problems related to food intake were viewed as one factor when the sample responded to the team role. However, problems related to food intake were viewed as a separate factor when the sample responded to dietitian and physician role.

2. Patient nutrient intake was perceived as one factor regardless of how the sample responded.

3. Patient response to feeding, whether enteral or parenteral, was regarded as one factor regardless of how the sample responded.

4. The calculation of the patient's nutrient requirements, whether fed enterally or parenterally, were viewed as one factor when the sample responded to physician and team roles; however, enteral calculations were viewed as separate from parenteral calculations when the sample responded to the dietitian role.

The statistical and conceptual fit between factors within each matrix and the statistical fit across matrices supported the identification and labeling of five patient-related factors: 1) _the input/output factor_; 2) _the oral factor_; 3) _the nutrient intake factor_; 4) _the patient response factor_; and 5) _the nutrient requirement factor_.

TABLE 1. SUMMARY OF PATIENT-RELATED FACTORS

Factor No.	Factor Description	Factor Loadings		
		Dietitian	Physician	Team
1	Input/Output Factor:			
	stool frequency	0.74	0.69	0.65
	IV fluid intake	0.60	0.70	0.55
	stool composition and pH	0.64	0.59	0.61
	nausea and vomiting	0.53	0.60	0.70
	oral fluid intake and output	0.62	0.56	0.61
	IV nutrient intake	0.49	0.59	0.57
2	Oral factor:			
	appetite/taste	0.79	0.76	*
	chewing/swallowing	0.71	0.64	*
	food intake and aversions	0.64	0.68	*
3	Nutrient intake factor			
	nutrient intake, parenteral	0.81	0.68	0.76
	caloric intake, parenteral	0.78	0.70	0.76
	nutrient intake, enteral	0.46	0.80	0.85
	caloric intake, enteral	0.44	0.78	0.84
	basal energy expenditure	0.55	+	0.46
4	Patient response factor:			
	clinical date	0.78	0.68	0.76
	metabolic date	0.74	0.69	0.74
	parenteral solution	0.54	++	0.76
	enteral product	0.45	++	0.71
5	Nutrient requirement factor:			
	P:C:F ratio, parenteral	*	0.79	0.55
	P:C:F ratio,enteral	*	0.75	0.52
	electrolytes, Vit., Min., enteral	0.51	0.57	0.62
	electrolytes, Vit., Min., parenteral	0.44	0.51	0.59
	fluid	0.65	0.44	0.62
	renal solute load	0.64	0.46	0.62
	nutrient density	0.45	0.51	0.57

* Loaded on factor 1 with loadings of 0.71, 0.72, and 0.65 respectively

+ Loaded on factor 5 with loading of 0.60

++ Loaded on factor 8 with loadings of 0.43 and 0.47 respectively

Feeding Factors

The configuration of role functions related to feedings is presented in Table 2. Factor loadings indicate the same kind of pattern that was visible in Table 1. i.e., 1) enteral feedings and parenteral formulas were viewed as one factor when the sample responded to the physician and team roles; whereas enteral feedings and parenteral formulas were viewed as separate factors when the sample responded to the dietitian role (factors 6, 6B). The statistical fit between physician and team role functions supported the identification and labeling of one factor, the formula factor.

TABLE 2. SUMMARY OF THE FORMULA FACTORS

Factor No.	Factor Description	Factor Loadings Dietitian	Physician	Team
6	Formula factor:			
	parenteral solution	*	0.80	0.75
	rate of administration (parenteral)	*	0.80	0.72
	rate of administration (enteral)	0.70	0.73	0.75
	enteral feeding	0.73	0.72	0.70
	concentration and stability of IV solution	*	0.67	0.77
	route of administration	>0.40	0.70	0.64
	concentration and stability of formula	0.70	0.65	0.67

*Loaded on factor 6B with loadings of 0.60, 0.63, and 0.60 respectively

Practitioner Factor

Three configurations of practitioner functions are presented in Table 3. Factor loadings indicate:

1. Patient counseling, regardless of content, was regarded as one factor when the sample responded to physician and team roles. Counseling the patient about nutrient/fluid intake, weight fluctuations, and use and care of products was viewed as a separate factor from patient counseling when the sample responded to the dietitian role in other content areas (factors 7, 7B).

2. Deciding what formulas would be used, whether enteral or parenteral, were viewed as one factor, regardless of how the sample responded.

3. Research, administrative, and procedural functions were perceived as one factor when the sample responded to dietitian and physician roles; however, they were viewed as three separate factors when the sample responded to the team role (factors 9, 9B, 9C).

These data support the identification and labeling of three practitioner-related factors: factor 7, the counseling factor; factor 8, the decision-making factor; and factor 9, the leadership factor.

TABLE 3. SUMMARY OF THE PRACTITIONER FACTORS

Factor No.	Factor Description	Factor Loadings Dietitian	Physician	Team
7	Counseling factor:			
	family support	0.65	0.56	0.65
	nutrient fluid intake	*	0.64	0.65
	weight fluctuations	*	0.61	0.65
	use and care of products	*	0.60	0.64
	medications	0.61	0.54	0.68
	activity	0.52	0.61	0.65
	personal care	0.69	0.40	0.50
	GI symptoms	0.44	0.66	0.64
	economic assistance	0.73	>0.40	0.11
8	Decision making factor:			
	enteral formula	0.43	0.45	0.71
	parenteral solution	>0.40	0.64	0.67
9	Leadership factor:			
	sharing literature	0.68	0.63	+
	research and publishing	0.63	0.70	+
	public speaking	0.62	0.61	+
	allocation of resources	0.67	0.65	++
	communication strategies	0.62	0.68	++
	team leadership	0.63	0.41	++
	policies and procedures	0.47	0.56	0.67
	reimbursement mechanisms	0.62	0.60	0.47
	job descriptions	>0.40	0.57	0.68

* Loaded on factor 7B with loadings of 0.40, 0.60, and 0.44 respectively
+ Loaded on factor 9B with loadings of 0.73, 0.69, and 0.72 respectively
++ Loaded on factor 9C with loadings of 0.75, 0.52, and 0.65 respectively

Discussion

A description of practice is comprehensive only in so far as it delineates the interrelationship between theory (content) and practice (process), and a curriculum designed to prepare nutrition support practitioners must include both these dimensions. Yet, role delineation studies have tended to focus on the discipline-specific, functional aspects of treatment and care, rather than on the general content and process of practice. The sample in this study identified both general and specific content, as well as generalizable processes inherent in the delivery of nutrition support services. Chiefly, however, the data lend empirical support to the description of practice as it appears in the literature.

Content

The magnitude of inter-correlations reinforce the premise that every member of every nutrition support team needs a practical working knowledge of fluid/electrolyte balance; protein/calorie ratio and requirements; and nutrient intake in relation to nutrient requirement. In addition, team members need the knowledge required to evaluate metabolic response to both enteral feedings and parenteral solutions.

Differences in factor loadings contribute to an understanding of the dietitian's unique role on the team. Differences lie predominately in the sample's "enteral" orientation to the dietitian role and its "parenteral" orientation to the physician and team roles. That is, both the physicians and dietitians in this sample had an orientation to the dietitian's role which is consistent with Wade's contention that the clinical dietitian specialist: 1) is responsible for determining the specific enteral formula which will most effectively meet specific patient needs; 2) must be able to combine each of the energy yielding nutrients in a way that provides the nitrogen:calorie ratio necessary for net protein utilization and anabolism; and 3) participates in team efforts by performing nutrition assessment, as well as planning, implementing, and evaluating nutrition prescriptions[9].

Since there were no nurses or pharmacists in the sample, descriptions of their specialized practices are not possible. However, certain generalizations can be made about physicians, pharmacists, nurses, and dietitians working as a team. Each discipline-specific clinician is involved in a different process, but all aim at the same goals. Therefore, each needs to know what the others know, but for a different reason. Each comes to the team with a previously acquired discipline-specific theoretical knowledge, but all need to acquire or impart to others a common working knowledge of pathophysiology and feeding technology, as well as fluid, electrolyte, nutrient, and drug metabolism. Future research is needed to explore the nature of this common content, and how it can be best obtained. However, data from this study argues for common content and team training, rather than specific content and segmented training.

Process

Content, however represents only half of a training program. Factor loadings support the contention that team members need certain process skills if they are to operationalize what they know. An assumption underlying the team concept is that each member of the team has something unique and significant to offer, not only to the patient, but to the team as well. A viable team is a system which supports the growth and differentiation of its component parts, hence, the life of the team. For this to happen, each team member must be as effective as others. In the words of more than 50 percent of the physicians sampled, and effective team member must be "clinically astute." Factor analysis of the data suggests a broad definition of this term. The word "clinical" suggests the content of nutrition support, and the word "astute" suggests the ability to discern the meaning of that content. Both imply a set of highly developed conceptual skills and this is supported by the identification of the three practitioner-related factors, counseling, decision-making, and leadership. All factors imply skills which require the practitioner to: a) analyze, synthesize, evaluate, and communicate abstract data; b) manage human and facilitating resources; and c) conduct, evaluate, and disseminate clinical research. Such skills are generalizable across disciplines and identify the process dimension of nutrition support team training programs.

Summary

A study was designed to explore the structure of inter-correlations among descriptive dimensions of the dietitian, physician, and team roles on nutrition support teams. Dietitians and physicians on nutrition support teams were sampled and asked to identify who, whether the dietitian, physician, or team, performed role functions inherent in the delivery of nutrition support. A correlation matrix was computed for each of the three sets of role functions and subjected to factor analysis.

The magnitude and consistency of factor loadings suggests that nutrition support is not perceived as independent components, but as a comprehensive pattern or structure within which separate components fit. However, there was one important difference in perception. The sample tended to have an "enteral" orientation to the dietitian role and a "parenteral" orientation to the physician and team roles.

The data promotes contention that all members of nutrition support teams need a common core of knowledge and highly developed conceptual skills which can best be attained through an integrated, rather than segmented , approach to team training.

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INTRODUCTION

TEAM MANAGEMENT ISSUES

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Health care teams usually devote most of their energies toward either education or services. Professionals do all they can to prepare students for optimum participation in a collaborative setting. A good bit of time is also spent addressing the process and outcomes of team care. Occasionally, one explores the human relationships or other structural dimensions of team activity. Another exercise which can be extremely worthwhile is the application of management concepts and principles to health care team functioning.

Even in team settings, many health professionals have a propensity to make autonomous decisions regarding appropriate care for their patients. Team leaders recognize this inclination, and often direct their attention toward coordinating the individual efforts of team members to maintain the positive elements of interprofessional services. Such leadership is a fundamental element in successful team care.

However, it take more than coordination of services to create an effective team. Administration is also an essential feature of team organization and activity. Management tasks must be given attention, resources and energy if the team functions of teaching, research and service are to be satisfactorily implemented.

Speakers in this session addressed various aspects of team management and administration. The first paper, by Baldwin and Rowley, tackled central issues of team management; effects of non-management, attainment and maintenance of the managerial role, factors which emerge in negotiations for power and influence, and managerial tasks which should be assumed by individuals and subgroups within the team. Management culture of each team will depend on both the external environment and internal characteristics unique to the group and its members.

In the second paper, Spence, Clark and Sheehan provided a theoretical model for the systematic analysis of an interdisciplinary team. These authors suggest that each team is unique, having a distinct personality derived from the admixture of individual talents/skills/roles/perceptions and the relational dynamics/chemistry of the group. Use of both fluid and static concepts in analysis promotes deeper understanding of team members and enhances the quality of overall involvement with others.

Conflict within groups in inevitable. Drinka, in the third paper, reviewed the literature on conflict and applied principles drawn from organizational behavior to interdisciplinary teams. She recommended that team managers view conflict from four perspectives: human relations, structural, political, and symbolic. Such an approach allows analysis without first attempting to deal with conflict as a negative factor.

In the fourth and final presentation in this series, Bleyer described the need for and establishment of a community-wide information system to support decision-making. This human services data base provides an invaluable tool in the management of interdisciplinary health care.

DIVIDING UP THE WORK ON HEALTH TEAMS: THE ROLE OF ADMINISTRATION AND MANAGEMENT

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Introduction

In reviewing the experience of the various student health team training projects funded by HEW in the mid-seventies, Baldwin and Edinberg (1976) identified four faculty team models, each aimed at meeting differing goals and functions. The first model was that of a clinical preceptor faculty team, in which the team conducted its own clinical practice, preferably in a primary care setting, with students observing or participating as preceptees. The second model involved an academic teaching faculty team, which had a primary responsibility for curriculum and teaching about teams, usually in an academic setting, with students enrolled in required or elective academic courses. Third, there was a consulting-managerial model, where the faculty team served primarily as consultants to or managers of other clinical or academic faculty teams in a variety of settings,training them to supervise the clinical or academic activities of the preceptees or students. Model four was designated as a mixed-integrative faculty team, which functioned simultaneously or sequentially as a teaching or clinical team in one or more settings and, in addition, consulted with or managed other faculty teams. In general, the choice of a particular faculty team model was seen to be related primarily to the goals and setting of the program as well as to the predilections and capabilities of the faculty. At the same time, it was believed that faculty teams attempting to teach team training and development probably needed to address all of these functions.

Because of its long involvement with interdisciplinary education (Baldwin and Baldwin, 1980), as well as the particular set of circumstances surrounding the conception and funding of the Interdisciplinary Team Training Research and Curriculum Project (Team-TRAC), the University of Nevada, Reno, adopted a broad approach which closely resembled the mixed, integrative model. At the same time, there was clear recognition of a need to promote teamwork in the conduct of the separate functions of clinical care, teaching, consulting and management.

Later, the Nevada group described an additional area of team function and collaboration around the activities of research and evaluation (Thornton et al., 1979). Thus, while Baldwin and Edinberg's original topology attempted to differentiate between the various goals and functions of those faculty teams involved specifically in student training, it was clearly recognized that, within any team, there may be specific subsets of functions and tasks that call for teamwork in their performance and achievement. The need for the overall team to recognize and deal specifically with these component functions and tasks is regarded as a significant observation in the ongoing development of a theory of health teams. In other words, health teams, whatever their mission or setting, have specific subsets of goals, roles and tasks, each of which calls for teamwork in its own right and must be addressed in the same way as are the overall goals, roles and tasks of the larger team. Whether or not the team as a whole delegates these particular subsets of functions and objectives to a particular person or subgroup or decides to deal with them as a total group may have significant implications for issues of trust, energy, and effectiveness.

Teamwork in Administration and Management

Additional functions which have received less attention in the developing literature on teams are those of administration and management. Most teams have tended to lump these together with the issue of leadership as an aspect of overall team development. However, it was the observation of the interdisciplinary faculty at the University of Nevada, Reno, that, as with the other functions of teaching, service and research, administration and management must be recognized as "separate, but equal" functions requiring teamwork. They, too, must negotiate for recognition and a significant place in the team's priorities and must be allocated their appropriate share of resources, energy and personnel, if the team is to achieve success. It is not enough to elect or designate, or to accept an appointed or inherited project director and assume that the issue is resolved. On an egalitarian team, such functions must be operationalized in terms of roles and tasks and must be negotiated in the same fashion as are all others - and, we believe, early in the team's development.

It is important at this point to clarify the functions of administration and management. Dictionary definitions are not particularly useful, since each contains references to the other term, i.e. an administrator manages - a manager administers. While business texts frequently attempt to distinguish between them on the basis of status, power or role, in practice there is continuing confusion because most persons in responsible positions carry out both functions. On health teams, the term management frequently is applied to various internal functions of the team, such as establishing priorities, allocating resources and assigning tasks, while administration is seen as dealing with external demands such as funding, liaison, communication, resource acquisition and personnel management. Perhaps as much light an any is shed by the origins of the two words. Administer comes from the Latin ad + ministrare, to attend or serve, while the origins of manage relate to the old French word "manage", which means to handle a horse, as well as to the Latin "manus", or hand. That these functions are not necessarily synonymous with leadership is one of the more important contributions of team theory (Parker, 1972).

Teamwork in management has long been recognized as the mark of a progressive organization. Thus, management and labor in industry periodically sit down and negotiate issues such as production, compensation and working conditions. The mission or goals are usually set by the management or the owners and the administration sees that roles and tasks are assigned and coordinated. Little, however, appears to have been written about administrative teamwork on health teams.

On health care teams, the role of administration and management becomes one of facilitating the process of accomplishing the mission and work of the team, and usually, involves defining the roles, tasks and procedures required to accomplish these (Rubin, et al., 1975). These latter appear to fall in the realm of managing the process of teamwork and collaboration. If this process is successful, some of the identified tasks will be seen as administrative, and one or more persons on the team may be asked or expected to assume this role and perform these tasks. The recognition, negotiation, and delegation of this role to a particular subset of the team seems clearly to be an important piece of "team work."

The Administrative Team at Nevada

At Nevada, the administrative role and task was handled by a clearly identified subgroup or team, which worked closely with the leadership of the other functional team components within the overall team project. Thus, on regular occasions, members of the research, clinical and teaching groups, in addition to meeting on their own or with each other as necessary, would also meet with the administrative team to work on internal issues, such as leadership, decision-making, roles and goals, as well as the more immediate issues of budget and resource allocation. This administrative team also was expected - once again by negotiation - to take the leading role in dealing with the team's external interfaces, including those with the administration of the medical school and the university, as well as with funding agencies and professional and community groups. It is the purpose of this paper to elaborate on the processes of team development and function in the light of a closer examination of the structure and functions of this administrative team and to describe the particular constellation of skills and techniques which appeared to be successful in this setting.

The administrative team at the University of Nevada included a senior primary care physician, with considerable experience in both the academic and clinical aspects of team function and development. He had served as a member of the previous interdisciplinary program and had written both of the grants. He was also director of the medical school division in which the project was based, so that he carried clout at the administrative level and was able to interpret and defend the program from external criticism. Complementing his skills were the knowledge and skills of another member of the administrative team, the program coordinator, who was a medical sociologist with skills and experience in community and organizational development. She also had clinical experience as a social worker. Both of these persons had participated in the development of the team project and had a commitment to the program in all of its objectives.

Additionally, both of these persons had had experience with research and evaluation and placed a high priority on this area. They could interpret the needs and direction of the research program and of the research group to the rest of the team, as well as assist the coordinator of the research team in her task. As a clinician, the physician-director was able to understand the necessary demands and problems of the clinical care component of the program, while the program coordinator could work with the complex organizational issues of team training and coordination. Finally, both had had considerable experience with teaching and with the academic administration of the university and were able to carry out the necessary steps for course approval and implementation of the academic program. The administrative team also included the administrative assistant and the several secretaries, all of whom participated in both the administrative team and entire faculty team meetings.

What is being described, then, is the essence of teamwork--the interdependent and collaborative use of component skills and knowledge in the performance of a clear task and function. In this case, it was administration--the nature of which was exceedingly complex and might easily have vitiated the energies and strengths of the rest of the team had the latter been forced to become preoccupied with their accomplishment. Thus, just as the research team was responsible for and carried out the design, gathering and analysis of research and evaluation data from the project; the clinical team designed and operated the clinical setting; and the teaching team planned and conducted the team courses; so did the administrative team take responsibility for its several functions, with the common agreement and understanding that such would be reported back and discussed with the team as a whole.

As with other team functions, this did not always work perfectly. At times, the administrative team, like the others, appeared to work apart from and at odds with the other groups. A major reason for this may have been the inability of the administrative team at the beginning to see their job clearly as a subset of team skills and functions, requiring its own team development as well as effective information and feedback systems. Nor, at first, did other subsets of the team clearly see the administrative role and task as separable and delegatable, neither did they see themselves as operating in assigned and, at times, separate ways.

Indeed, at the beginning of the team training program, the entire faculty team felt that it should be involved in every decision and in every task. Thus, when one subset of the team was assigned the specific task of designing the academic courses on team training, their report, which was based on a considerable amount of thought and work, was vigorously criticized and revised by the team as a whole, leading the teaching group to wonder why they had bothered to take on the assigned task. While at the time, this was viewed as a problem in trust; in retrospect, it may equally have been one of lack of clarity and failure to accept the two-way responsibility of task delegation.

Related to this was the observation that while the total faculty team frequently found itself at odds over what priority should be assigned to its several goals (teaching, service, research), the team subsets seldom had difficulty identifying their own primary goals and tasks. Thus, failure to perceive and to agree on which overall goal to focus, led to endless debate and vitiation of effort and energy. Once again, trust frequently was indicted, rather than lack of clarity. Despite the clear warnings of Rubin and others, the faculty team frequently "mounted its horse and rode off in all directions!"

Negotiation of Subgroup Roles and Tasks

An additional insight which emerged during the course of the Team-TRAC program was that there appears to be a particular order in which such subsets of tasks or functions are challenged and negotiated. While undoubtedly influenced by external demands, in general, we believe that this order also is related to the perceived power of the particular role or discipline and the salience or priority of the task. In the case at hand, the overall faculty team first challenged and then sought to define the role and task of the administrative team, attempting to regulate how much of this role and task should and would be shared with other members of the team. Once it became clearly understood that this task and role could and needed to be handled by a particular subgroup, the administrative team proceeded relatively unchallenged, interacting with the rest of the team on a daily basis as appropriate, but chiefly through a weekly meeting, at which the representatives or managers of each of the functional subgroups were present.

Predictably, the next role to be challenged was that of the clinicians, especially the physicians on the team. We believe that this was related not only to the traditional power and prerogatives of this role, but also to the high salience of the clinical mission. Thus, a clearer definition of the physician's role and of the relationship between the various clinicians on the team appeared to be a next and necessary step in team negotiation.

A special issue involved the traditional "leadership" role of the physician. While this role is often assumed by the latter, or assigned by other disciplines, given the egalitarian definition of the project, there was no way in which the nurses and others were prepared to passively relinquish the leadership role to the physician, except in the most narrow and essential dimension--that of final medical decision-making. For example, the physician was by-passed several times in selecting the position of clinical team coordinator or manager--filled at first by the social worker and later by one of the nurses. Even in the clinical area, the nurses, by spending long hours in the clinic, managed to effectively control the modalities of time, space and information--key elements which define power in any interactional model of behavior. Thus, in making any judgment, the physician (and other team members) usually had to turn to the nurses for key information which they alone possessed. In retrospect, it is unclear if this process was based on the personal characteristics of the physician and the nurses, the pronounced norm of egalitarianism found on the team, a basic lack of trust among team members or was due to the vast clinical experience of the team, whose average age was 43 years.

Interestingly, at no time did it appear that the two nurses or their roles were directly challenged by the team. Whether this was due to the fact that there were two of them (there was only one of every other discipline represented on the clinical team), or were experienced players of the "Doctor-Nurse Game" (Stein, 1967), or effectively controlled the space, time and information systems, or were perceived as being included within the physician or clinical role, they did not experience the same degree of challenge as did other "roles" on the team.

The next functions and roles to be systematically challenged and defined were those of teaching and of the behavioral science personnel on the team. These persons (social worker, psychologist and communications) were perceived as having special expertise, as well as time and energy to address the teaching tasks assumed by the faculty team. Yet, as "non-medical" clinicians their role in the clinic was less clear and even in teaching (where the students were predominantly from medicine and nursing) the relevance and effectiveness of their contributions was questioned by the other disciplines and group, especially the clinicians, who perceived the major mission of the team to be clinical. At the same time, one of the behavioral scientists, perhaps because he was of the same sex, or because he was skilled in group and organizational behavior, continuously and systematically challenged the physician's role and behavior, reinforcing the norm of egalitarianism. Indeed, it is possible that this obviated the need for such challenge to come from other team members.

The last functional role on the team to be systematically challenged and reviewed was that of research and evaluation. Since these activities were slow in starting and relatively "long term" in payoff, they did not at first attract the attention or pose a significant challenge to the other members of the team for essential resources. Thus, their perceived task and role was accorded a lower place in the hierarchy of pressures and demands, until the necessary accomplishment of their task began to specifically compete for the time, energy and resources of other team members. At this point, criticism peaked and there was conflict over the value and priority of the task and role of research in the overall team effort. Only after open confrontation and a growing awareness on the part of the research group that "no group (task) is an island," did the rest of the team feel included and begin to "own" the research effort (Thornton et al., 1979).

Long Term Survival

It is of considerable interest that, in retrospect, the particular task groups identified within the overall team, i.e. teaching, service, research and administration, survived more intact as working entities than did the overall project team which numbered 10 persons. For example, two of the three members of the research group continued to work together for several years after termination of the project (the third left the locality before the project ended), three members of the clinical team continued to work in close association as members of a subsequent clinical team (the physician also left at the termination of the project), and the members of the administrative team continued to work together successfully in another arena. Because of the changes in the mission and emphasis of the school and the cessation of outside support the overall interdisciplinary team effectively dispersed into various departments of the medical school and university.

It would appear then, that teams formed around a highly specific task or function which is an integral and accepted part of the goal or mission of the team--and of the school--tend to survive in an intact fashion more often than does the overall project team, which tends to have a short half-life due to funding and support patterns. This should not be surprising, since such small groupings tend to be more specific in their priorities and functional in their operation. In addition, such groups have more frequent and intense interaction which increases cohesion (Homans, G., 1950).

What were some of the factors which made these smaller task groups successful? Greater clarity and specificity of goals and tasks were certainly major factors. Since the particular function or task was quite clear (i.e. teaching, service, research, administration, etc.), the group could focus fairly quickly on considerations of specific roles and on developing effective and accepted procedures for handling decision-making and conflict resolution. Available skills and disciplines were quickly identified and assigned to task accomplishment. Some of the enormous stresses and strains of the larger faculty team over which of its several goals its limited resources should be committed, were avoided in the smaller groups because tasks and goals were much more clearly perceived and pursued. Indeed, a major source of stress occurred when the smaller sub-teams reported to the larger team and the recurring question of priority of goals and tasks reasserted itself. Thus, it seems that a small group with a clear goal and task can function more efficiently and effectively than can a large group with diffuse or conflicting goals, tasks and interests.

A second factor may have been that power and leadership issues were less intense in the smaller subgroups than in the larger team. Perhaps there was less at stake in the subgroups, since every member knew that their work eventually would be reviewed by the larger group and that minor differences might be better addressed at this level. Also, since the groups were small, the concept of "shifting leadership," in other words, persons moving into areas of leadership as their roles and skills dictated, may have been easier to effect. Finally, it is believed that delegation of the role and tasks of administration to another group may have removed concern over these issues from the subgroup environment.

The factor of personal motivation for belonging to teams cannot be overlooked. Persons join teams for many reasons. Health teams may be perceived as: 1) a mechanism for being together and enjoying the emotional support and company of persons with like philosophy and goals; 2) as a way of working and accomplishing tasks together in an interactive manner; 3) as a way of appreciating or diluting differences and maximizing energy and input towards task or mission; and 4) teams may be seen as a mechanism for accomplishing significant changes in either the educational or patient care system. These diverse motivations for joining and participating on health care teams undoubtedly contribute to conflicting goals, which can dilute the energy of the group.

An added factor is that of personality (Pihl and Spiers, 1977). While most writers feel that interpersonal issues tend to be overrated and often serve as a cover for lack of appropriate skills or mechanisms for determining task-oriented work (Rubin et al., 1975), personality differences undoubtedly can created difficulty on teams and can seriously interfere with work accomplishment if they are not appropriately managed. Indeed, there is some evidence that certain personality types, as determined by the Myers-Briggs personality type indicator (MBTI), are less strongly drawn to team work than others. Royer (1976) and others have used the MBTI to help select membership on family practice residency teams, with the general impression that S (sensing) types generally do not fit in well on teams and that persons who differing by more than two dimensions may have difficulty relating to each other in terms of the interpersonal and, possibly, the task dimensions of their work.

Still another factor which may play a role is that of management style (Reddin, 1965). Management style alludes to the particular fashion in which persons organize and accomplish their work in relation to others, and includes such quaint designations as Developer, Missionary, Bureaucrat, Autocrat, and Deserter. It is interesting that the style synthesis, or composite management style of the original faculty team at the University of Nevada, Reno, in 1975 was that of Developer, with the supporting style being that of Missionary. (There was one deserter!) This composition meant that overall task orientation tended to be relatively low, while relationship and effectiveness orientations were high. On the other hand, the smaller task groups described here appeared to present a greater degree of task orientation and to exhibit more diversity and effective interdigitation of management styles.

Conclusions

In reviewing the Team-TRAC experience at Nevada, one is tempted to think that size alone may be the major variable in determining the effectiveness of teamwork. On the other hand, given the breadth of goals and tasks facing this and other team training projects, smaller faculty teams probably would have buckled under the tremendous expectations of team members and external agencies. More important, probably, is a realistic assessment of goals and tasks and greater attention to procedures for establishing priorities. Another mechanism suggested by this paper consists of identifying specific goals and tasks which are functionally related and assigning these to subsets of the team. Such functional team units can then realize the benefits of clarity, trust and smaller size.

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TOWARD A THEORETICAL UNDERSTANDING OF INTERDISCIPLINARY HEALTH TEAM CARE

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Interdisciplinary education is a process which moves students from a unidisciplinary mode of functioning through a multidisciplinary mode and into an interdisciplinary mode. This process is complex bringing individual reactions and interactions into play, as well as group processes and conflicts. These activities take place in situations strongly influenced by professional philosophies, values and norms which differentiate the individual health care team members. Becoming a member of an interdisciplinary health care team is in essence a process of resocialization.

One of the best theoretical frameworks for understanding the implications of any socialization process is symbolic interaction based on the philosophical tradition of American pragmatism. The advantages of this theoretical perspective are due to the opened, problematic approach which it assumes. Mead (1936) in his discussion of how we become selves, suggests a view of society in which individuals take on the role of others as well as the perspective of their own role, in order to devise collective solutions to problems thereby generating an evolutionary process of social development. By attempting to connect the evolutionary process of social development. By attempting to connect the evolutionary process to social organization the "life-process itself is brought to consciousness in the conduct of the individual form, in his so-called self-consciousness" (Strauss, 1956:29). The form is dependent upon the conditions under which the life-process goes on. It is the same process, but responsive to any number of problems. The recognition of this distinction between process and the form it takes is what gives the health care team its unique and relativistic character.

The group structure which is evolving is directly related to the self identity of its members as they become socialized to the values of the health care team. Although much of the work in the symbolic interactionist tradition has focused on the socialization of children, a brief look at the work of Becker (1963) on deviance, or Goffman (1963) on spoiled identity, can highlight the application to adult situations. Becker vividly describes the need to learn both a series of behaviors and the language by which to internalize their meaning in the process of becoming a marijuana user and/or a dance musician. Because these are deviant roles the socialization processes are seen in sharp relief. In Goffman we see how the preconceived notions as represented in the symbols that apply to a stigma, as well as the personal experiences or identity of the stigmatized individual, structure the interactive processes that are the individual's life. The same processes occur in the formation of the health care team.

The socialization process that produces a deviant role is no different from one that transforms the health care professional into a member of the health care team. The point is simply that although dramatic and different situations call our attention to process, the nature of that process is essentially the same. John Dewey (1922) put it this way: We all are moving toward objectives, like an individual walking a path. Suddenly an obstacle stands in the way. If the objective is important, its importance determined as much by where we are coming from as well as where we are going, we try to figure a way to get past the obstacle. To the extent that we are successful (sometimes success means redefining the objective) we have learned an expected response. When the same situation occurs repeatedly, the responses become normative. Since norms imply choice or decision making, they are representative of the objectives being pursued or the values being maintained. Since the health care team members have been differentially socialized with respect to their health care roles, the conditions are ripe for conflict until a resocialization has occurred. This is what happens in the education of the health care team member as s/he moves from a uni-disciplinary professional perspective through a multidisciplinary one, becoming a truly interdisciplinary team player.

In this paper we are attempting to do three things. First, we want to identify and establish the need for a developmental approach which emphasizes process rather than outcome as the basis for studying the interdisciplinary health care team. Second, we want to look at the range of decision making which can occur and the basis for rigidity or change that affects the team's ability to succeed. Finally, we want to identify some process mechanisms which can bridge the difficulties that arise in response to the differential readiness for decision making among team members. These three sub-themes should suggest how this perspective can assist in our understanding of the interdisciplinary health care team.

The Developmental Approach

When the health care team stops changing or developing as a group then its existence has become more important than the purpose for which it was formed. When role expectations relate to outcomes rather than processes, the group becomes rigid and inflexible unable to respond to the unique characteristics of individual problems. The tendency for this to occur results from the need to reduce ambiguity in relation to the complexity of a person's multiple roles and reference group memberships. One's personal values in relation to the socio-cultural context are present as confounding variables in all situations in which objectives are pursued over time. An example is the physician who labels his patient non-compliant when he fails to follow the prescribed medical regimen. The physician's objective to treat and heal the patient hinders his perception of the social factors influencing the patient's behavior. The physician's socialization has prepared him to make and act upon decisions which are far different from those of his patient. When the problem is acute and theoretically responsive to treatment the issues are far different than they are when the problem is chronic and at best can only be managed.

A major health care problem and a reason for the development of health care teams is the increasing proportion of clients who present with chronic or multiple health care problems requiring effective management rather than cure. This is helping us understand the differences in values between health care professionals as well as the need to include the client or recipient of services as a member of the health care team. It is the inclusion of the client which gives each application of the health care team its unique developmental properties.

"Development (or the relations between 'permanence and change' between 'before and after') may be conceptualized as a series of related transformations. Etymologically the term 'transformation' invites us to consider changes in form - changes in being, kind or psychological status" (Strauss, 1969:91). The definition, like the philosophical tradition from which it emerges, is pragmatic - "a point of view . . . which stresses the crucial role of language for human behavior. It also stresses a kind of opened, partially unpredictable, view of events: interaction is regarded as guided by rules, norms, mandates; but outcomes are assumed to be not always, or entirely, determinable in advance. This indeterminacy need not be a stumbling block to scientific research, but has to be taken into account" (Strauss, 1969:10). For example, the iatrogenic consequences of routine practices and diagnostic testing in the applications of internal medicine with geriatric patients has been identified as a serious problem but remains unstudied due to commitments to normative behavior grounded in values which are assumed to be correct (Crescenzi & Steel, 1984).

It should be noted that the position we are taking challenges any "essential" source of knowledge. Unlike classical empiricism which insists that the ultimate source of all knowledge is observation, or rationalism which insists that knowledge is in the mind's ability to reason, pragmatism is relativistic. Pragmatism rejects ultimate authority because it sees values as behavior arising through the same interaction of symbols that form and develop any area of behavior. Our present commitment to empiricism is a cultural phenomenon which is undergoing change in some areas (Ryff, 1986; Thompson, 1981).

The theoretical approach based on the traditional role concept tends to be static and fails to consider the differences among team members in such critical areas as their different histories and personal values, their understanding and commitment to team objectives and their feelings about their professional contributions to the team process. Differential readiness for decision making highlights the difference between fluid and static concepts of teams in their delivery of interdisciplinary health care. A common problem in many health care teams is to identify those that should have input into any given decision. Any process which suppresses the full participation of those with information to contribute is limiting the group's effectiveness. Yet the differences in preparation for decision making keep many groups from ever becoming true teams. When you include the client as a member of the health care team the situation is made most difficult (Rubin and Beckhard, 1972:363).

Differential Readiness For Decision Making

Doctors are trained to make decisions on the basis of information provided through diagnostic tests and history taking. Clients, on the other hand, expect the doctor to discover what health problem(s) they have and are at times even hesitant to answer direct questions. Economic and social data are seen as areas of personal privilege and many times deliberately withheld. A major problem in developing democratic and participatory decision-making by the health care team is to educate the client as to his/her appropriate role. Likewise, the question of who on the team is best capable of providing the information necessary to make a decision makes the notion of a clearly defined job description a virtual impossibility. Other questions like who needs to be consulted before certain decisions get made, or who needs to be informed of a decision, are part of the group's dynamic which demands an open interpretation of normative behavior. When norms become specific expectations, then there is little flexibility to group process.

I like to think of norms in a somewhat unique way. Dubin (1960) called it the sewer pipe concept of norms. It is only when behavior exceeds a boundary that it is problematic and then only when a stink is made. Since the interdisciplinary health care team is constantly changing, what produces a stink is changing also.

Strauss (1969:43) argues, ". . . it is not change that needs to be explained but its specific directions; and it is not lack of change that needs to be taken for granted, but change itself." Because the processes of change tend to be governed by normative considerations, we are not always aware of the extent to which we participate in shaping our lives and thereby the social order in which we exist. Even to the extent that one accepts another's definition of the situation it is still an active process in which everyone participates. When the issues involve one's health status in relation to the life situation some rather dramatic consequences emerge. For example, the institutionalization of the elderly. Because aging is defined by many in our society as ever increasing pathology, families feel that to provide any care is tantamount to assuming total responsibility. This is why the decision to institutionalize once made is difficult to reverse and why passive euthanasia seems to be growing in acceptance. Since the condition cannot improve by definition and institutionalization itself constitutes a less than acceptable quality of life, why not let an infection or congestive heart failure solve the problem (Miller, 1984). What such a position fails to recognize is the rehabilitative potential of most older individuals. The interdisciplinary health care team is a way of introducing change into this negative situation due to different approaches to geriatrics by various team members. For example, rehabilitation medicine and physical therapy are directed by the consequences of a rehabilitative approach to geriatric care, i.e. functional management of the client's problem (Himmel, 1984).

Let us stop and think for a moment about the process of team development and the problems which are likely to occur. As has been indicated, the developmental properties of group process produce emergent characteristics which complicate the situation in several ways. First, the structure of the team changes with each client to be served. The client problems are different with differences in physical, social, emotional, environmental, and economic circumstances. In addition, team members grow in their ability to effect solutions to different types of client problems. What I am trying to suggest is the need for a process approach to the study of interdisciplinary health care teams (Glaser, 1978:109-115).

Social science generally approaches the study of phenomena by identifying units of analysis. Units which are described in terms of static properties when what we obviously need is dynamic properties of process. We will identify three such processes to suggest how such an approach facilitates our understanding of interdisciplinary health care teams in action. The processes to be discussed are bargaining, bridging, and coaching.

Bargaining: Bargaining, or negotiation as it is sometimes called (Strauss, 1978), is one possible means for achieving objectives when people need to deal with one another to get things done. The health care team as it attempts to develop a management regimen for one of its clients is bargaining at several levels. There are the different perspectives of the various professionals as well as the development and acceptance by the client of how best to manage his/her health situation. In essence, the social order that develops within the context of the health team is a negotiated order. Bargaining is patterned, not accidental. It has to be worked at and is continually reconstituted. Since the client's health situation is the objective of the bargaining process, any change in health status requires renegotiation or reappraisal.

As had been suggested, the individual's identification with his/her health profession will be at issue in the bargaining process. Multiple identities and reference group memberships give each team unique properties which alter the processes of who negotiates with whom, when, and about what, so that every change in team membership requires bargaining to reestablish the appropriate range of behavior allowed individual team members. When one profession, or one's personal identity, so dominates the bargaining process as to make decisions by coercive threat the team effectiveness is diminished and it no longer can be called interdisciplinary.

Bridging: Bridging is the process by which blockage in team development is surmounted. Since in our theoretical perspective we look at the team as a developing structure, examples from student teams are as valid as any. Team members function in professional and personal contexts as well as in team activities which may renew problems, even those once resolved. For example, when promotional considerations are governed by professional department there is a valid reason for an individual to emphasize professional rather than team values. This can return the situation to where uni-disciplinary or multidisciplinary characteristics prevail (Clark, Spence & Sheehan, 1986). In uni-disciplinary situations bridging occurs through education. As team members learn the complexities of delivering health services in a holistic mode they discover the usefulness of the information provided by team members without having to learn or relearn an aspect of health care delivery. Or, on the other hand, they learn what the social worker, physical therapist, nurse, or nutritionist can do which frees them to be more effective in relation to their own professional contributions.

Knowing or even understanding what the specific profession can accomplish does not change one's values. As the multidisciplinary situation emerges conflicts arise in relation to whose contribution is most important. Whose client is it? Personal values can also generate hostile feelings about working with specific colleagues which are bridged through a recognition of the effectiveness that a team approach can generate. If the interdisciplinary health care team was not a better way of meeting health care objectives it would not be the approach chosen in relation to today's health problems. Someone who understands this can assist in facilitating the bridging process.

Coaching: Coaching in relation to one's stage of development can be critical (Strauss, 1969:109-118). The coach must be able to assess the needs of his/her protege in terms of the steps s/he must take to reach the objective of team player. The path is clear only to those who have already reached this stage. "Certain aspects of what lie over the horizon are blurred to the candidate, no matter how clear may be his/her general path" (Strauss, 1969:109). This is why education of teams is most effective when taught by a faculty team or why a mentor facilitates the integration of a new team member into a working situation. The learner has someone to identify with in terms of the values of the team approach and although not entirely clear about the steps to take to become a team player, someone they can trust to assess where they are and tell them what to do next. The coach anticipates what the learner needs in order to progress as a team player. By predicting and explaining the implications of each step, the coach builds confidence and trust to encourage the flexibility needed in the interdisciplinary health care team.

Without the coach, the openness to become a team player may not be there. This can occur also when one's identification with his/her health profession is insecure. The need to be accepted by one's peers makes it difficult to accept someone other than a peer as coach. Rubin and Beckhard (1972:365) describe this problem as it relates to medicine because of its "culture." Doctors are trained to make decisions by themselves or in consultation with peers of equal status. On the health team doctors and the clients being served must behave as peers. It takes a secure person with an open attitude to accept someone of a much lower status as a coach.

Summing Up

We began by identifying the central problem of the interdisciplinary health care team in terms of resocializing professionals to become team players. The symbolic interactionist perspective was advocated because of its open ended, problematic approach. After a brief introduction to this pragmatic tradition, three sub-themes were outlined as examples of how this perspective can help us understand team issues and problems.

Looking at health care teams in developmental terms recognizes the fact that they continue to change in response to the clients being served and team membership. This approach emphasizes the emergent properties of processes which occur in relation to the different values which team members are pursuing and which create the differences in one's readiness to decide on a course of action. Working out a social order to achieve team objectives in the face of multiple roles and reference group memberships, creates difficulties which must be bridged. Process mechanisms, bargaining, bridging, and coaching are offered as examples of the way this approach can help us understand the operations of the interdisciplinary health care team.

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INTERDISCIPLINARY HEALTH TEAM AND ORGANIZATIONAL LITERATURE: AN ANALYSIS OF APPROACHES TO CONFLICT RECOGNITION, RESOLUTION, AND MANAGEMENT

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Introduction

> Conflict is part of the normal state of an organization. The consequences of conflict are also normal, in that they are both organizationally and individually positive and negative.[1]

Statements like this are common in organizational literature, and this perception of conflict intuitively makes sense. Since interdisciplinary health team literature draws heavily from organization literature, it should share this view. However, my personal observations of health care teams suggested that health professionals generally view conflict as negative and usually try to avoid it. In deed, in their book on interdisciplinary health teams, Ducanis and Golin[2] note that in a critical incident study of ineffective team function, 62 percent of the incidents were due to lack of communication or interprofessional conflict. These authors also observed that the initial reactions of health teams is to avoid any overt disagreement. Pearson[3] believes that the interdisciplinary concept is more attractive in theory than practice because interprofessional conflict reduces team effectiveness.

As Linda Putnam[4] states in her article on conflict in group decision-making, "no aspect of group decision-making inspires greater simultaneous attraction and avoidance than conflict." Based on this dichotomy of perceptions I investigated the attitudes toward conflict described in organizational and health team literature.

Purpose and Background

The purpose of this paper is to explore the differences, if any, in the definition, recognition, use, and management of conflict between organization and interdisciplinary health team literature.

My assumptions about organizations are based on Bolman and Deal's[5] review of the organizational literature. They categorized this literature into four frames: structural, human resource, political, and symbolic. Each of the four frames assumes a different approach to conflict. The description of the four frames and their relationship to conflict is paraphrased as follows:

"Structural" frame: organizations exist to establish goals through formal roles and relationships. Problems arise when the structure doesn't fit the situation and can be resolved through redesign and reorganization. Conflict can undermine an organization's effectiveness and the ability of its leadership to function. Authorities must resolve conflict.

"Human Resource" frame: organizations exist to serve human needs and not vice versa. This frame focuses on the needs, skills and limitations, feelings, and prejudices of the employees. Problems arise when the fit between the organization and the individual is poor and can be resolved by maintaining a balance between human needs and formal roles, and by helping employees develop their interpersonal relationships.

"Political" frame: all individuals in organizations have access to power. Recognizing that organizations frequently have scarce resources, this frame assumes that problems arise because power, which affects allocation of resources, is unevenly distributed or so broadly dispersed that it is difficult to get anything done. Problems can be resolved by political skill. Conflict does not necessarily represent a problem.

"Symbolic" frame: the shared values and culture in an organization are more important than goals and policies. Problems arise when actors play their parts badly and symbols lose their meaning. Problems can be resolved by improving symbols, by myths, by magic, and by using conflict to negotiate meaning. Power is usually seen as an attribute that persons or systems have and can control.

Methods

Using Boman and Deal's[5] organizational frames as reference, I reviewed the proceedings of the National Interdisciplinary Health Team conferences.[6-12] The proceedings of the Second Annual Health Team conference (1980) were not available. The purpose of the review was to ascertain how many articles dealt with team conflict and to determine which of the four theoretical frameworks were used to address conflict.

All articles addressing team conflict were reviewed regarding definition, expression, and stated causes of team conflict; evaluation of team conflict as primarily positive, negative, or neutral; and recommendations for resolution of team conflict (Table 1).

Table 1. Review of Proceedings of National Interdisciplinary Health Team Conferences in Regard to Conflict

	Conflict			Resolution
Authors	Expression	Cause(s)	Evaluation	Strategy
Baldwin, Royer (1976)[13]	Uncertainty, anxiety, frustration	Life space of team undefined	Neutral	Human Resource
Drinka (1982)[14]	Power plays	Role conflicts, coercion, major change	Neutral	Human Resource
Garner (1983)[15]	Staff turnover, back-biting, distrust,	Interprofessional territoriality + competition due to	Neutral	Structural/ Human Resource

	Conflict			Resolution
Authors	Expression	Cause(s)	Evaluation	Strategy
Sobieszek (1983)[16]	Dominating behavior	Competitive and external status conflicts	Negative	Structural
More (1983)[17]	Independent vs care-giving behavior	Conflicting professional roles and norms	Negative	Need for additional research
Ray, Drinka (1983)[18]	Stress, lack of morale, adjustment difficulties	Challenges, change	Positive	No need for resolution
Goren, Ottaway (1983)[19]	Team fighting	Refusal to change behavior, staff turnover	Negative (if dysfunctional system is maintained)	Structural
Gavin, Kataja (1984)[20]	Rivalries, invasion of	Shared caseloads, different expertise, funding constraints	Negative	Political
Schiller et al. (1984)[21]	Power contests	Confusion over professional domains	Negative	Human Resource
Pfeiffer, Woodward (1984)[22]	Disagreements between extro- and introverted thinking and feeling types	Personality differences	Negative	Human Resource
Goren, Vaughan (1984)[23]	Inaccurate judgment of team members	Stereotypical thinking about team members	Negative	Human Resource
Farrell et al. (1984)[24]	Unclear membership boundaries, scapegoat and clown roles, collusion or avoidance behaviors	Open communication blocked, history of tension, member turnover	Negative	Human Resource
Drinka, Ray (1984)[25]	Changes in team member interaction	Differences in Team member needs	Neutral	Human Resource

	Conflict			Resolution
Authors	Expression	Cause(s)	Evaluation	Strategy
Monroe-Clay (1985)[26]	Personality clashes, unproductive meetings, poor communication	Incongruent roles, no preparation in teamwork skills	Neutral	Human Resource
Farrell et al. (1985)[27]	Polarization, informal expressive rituals and humor	Disagreement over roles and positions overload, no group process knowledge	Neutral	Symbolic/ Human Resource
Drinka, Ray (1985)[28]	Power Struggles	Conflicting needs of team members and of team and organizational members	Neutral	Structural/ Human Resource/ Political
Reeves (1985)[29]	Changes in lay and professional interaction	Change in resources	Neutral	Political/ Human Resource
Casto et al. (1985)[30]	Internal jealousy, destructive competition	Lack of trust	Positive	Human Resource/ Symbolic
Nichols (1985)[31]	Overt/covert lack of participation	Structured system	Neutral	Human Resource
Cocke et al. (1985)[32]	Individual psychological or physical stress response	Multiple roles: formal, informal self-imposed	Negative	Human Resource/ Symbolic
Lambert (1985)[33]	Internal confusion over accountability	Expected Roles or positions	Negative	Human Resource

Results

Of the 180 articles published in the seven selected proceedings, 21 (12%) addressed team conflict (see Table 1). Nineteen of these 21 articles were published in proceedings from the last three years (1983-85). Only one of the articles defined conflict. Ray and Drinka[18] defined team conflict as desirable tensions that continually seek balance. There was no clear delineation between what was perceived as cause versus expression of conflict. Most expressions and causes of conflict were subjective or not quantified; e.g., individual anxiety, low morale, frustration, power contests, lack of trust, and role overlap. Eight of the articles viewed unclear, multiple, or overlapping roles as a major source of conflict.

Ten articles viewed conflict as primarily negative; nine of these identified only one resolution strategy. Two of the articles viewed conflict as primarily positive. One of these recommended no strategy and the other a dual strategy.

Nine of the 21 papers either assigned no value to conflict or viewed it as both positive and negative. These were all assigned a neutral rating. Four of these identified multiple resolution strategies.

Sixteen of the papers advocated the human resource frame as at least one method of conflict resolution. Six advocated using more than one frame. None of the articles that recommended use of multiple frames was published before 1983. Two papers offered no strategies for conflict resolution.

Discussion

This review revealed differences between interdisciplinary health care team (IHCT) and organizational literature regarding definition, recognition, and use of conflict, and recommended strategies for managing conflict.

Ray and Drinka[18] were the only authors in the selected IHCT literature who defined conflict. A previous review of IHCT literature published within the past fifteen years revealed no definition of conflict. Authors of IHCT literature refer to different types and levels of team conflict; e.g., interprofessional and intra-professional,[2,34] interpersonal and intra-team,[35-37] and inter- and intra-organizational[28,38] levels of conflict. However, they generally do not define conflict. On the other hand, definitions of conflict are frequent in organizational literature and might refer to antecedent conditions, affective states, cognitive states, and actual behavior. Katz and Kahn[39] and more recently Dunham[40] pinpoint behavior as essential to a working definition of conflict. Dunham defines conflict as "when two parties possess incompatible goals and interact in such a way that the behavior of one (or both) of them threatens the other's goal attainment" (p. 343).

Most of the expressions and causes of conflict presented in the selected proceedings were subjective or not quantified, such as distrust, low morale, team fighting, rivalries, and role conflicts. The objective expressions and causes, such as staff turnover and funding constraints, were most often teamed with subjective ones. Authors of IHCT literature might do well to define conflict in behavioral or quantifiable terms so that it can be measured. Although conflicting behavior is based on incompatible goals, incompatible goals do not necessarily lead to conflicting behavior. It is difficult to measure and very easy to misperceive a team member's goals.

Review of the proceedings revealed no clear delineation between what was perceived as cause versus expression of team conflict. In reality, one often feeds into the other so quickly that it is difficult to distinguish a casual agent. Although Bolman and Deal's[5] review did not address this issue, these authors did discuss the impact of scarce resources, which make conflict both more likely to occur and more difficult to resolve. They also discussed the levels of conflict (low to high), which dictate which strategy might be most effective. Bolman and Deal indicate that the structural frame is most effective when the level of conflict is low; the human resource frame, when conflict is moderate; and the political and symbolic frames, when conflict is high.

According to Bolman an Deal, authors who advocate the structural and human resource frames tend to view conflict as negative; i.e., something that needs resolution. Authors who advocate the political and symbolic frames view conflict as neutral or positive; i.e., something that is inevitable and can be useful in problem solving. Seven of the twenty-one authors[13-15,20,25,26,31] did not use resolution strategies consistent with their evaluation of the conflict as neutral, positive, or negative. Bolman and Deal make it clear that most individuals become attached to one framework and tend to view their world through that particular framework. Perhaps the training of most health care professional supports either the human resource or the structural frame. Both staff and student health team members might benefit from an introduction to all four management frames. If Bolman and Deal's experiences(1984) with management groups apply, one could expect staff and students to initially respond to such education with confusion and conflict. However, the lessons could center on expanded strategies for addressing and managing conflict.

At a recent workshop for health care and health administration professionals, I introduced the frames by asking the participants which frame was primarily used by their hospital directorship and which was used by their immediate team. Fifty-two percent of the 31 participants thought that the structural frame was the primary management strategy used both by the hospital and within their immediate team. Thirty-nine percent thought that the political frame was the primary strategy used in their hospital, and 32% thought that human resource strategy was the primary strategy used in their team. The health care responders were not separated from the administration responders.

It would also be interesting to correlate use of particular management frames with the stage of a team's development. Some frames might be more relevant to earlier or later stages. In the proceedings reviewed, the political and symbolic frames were recommended for conflict resolution in only three articles, whereas the human resource frame was recommended in 16. This might demonstrate the youthful stages of development of many health care teams. In the early stages one would expect a team to be more concerned with its internal dynamics and increasing productivity through team members. For these activities, the human resource frame might be most appropriate. However, the extensive use of the human resource frame to the exclusion of the other frames might reflect the historical basis of IHCTs, i.e., small group and group dynamics theory. If the latter is the cause of such heavy use of the human resource frame, IHCTs might improve their potential as viable organizational entities by incorporating more strategies from the other frames. The "clown" and "nice guy" roles referred to by Farrell et.al.[27] are a good example of using the symbolic frame for conflict management. The recognition of universal, not necessarily equal, power for problem solving[28] is an example of advocating the political frame.

None of the articles in the selected proceedings published before 1983 advocated using more than one management frame. Bolman and Deal[5] note that "successful managers rely intuitively on the different frames, blending them into a coherent, pragmatic, personal theory of organizations." They also indicate that multiple frames are rarely used, and that most employees and managers operate from one frame. In fact, five of the articles from the selected proceedings advocated use of dual frames. Only one article (Drinka and Ray[28]) advocated use of three frames. The review of other team literature, revealed one article which advocated use of three frames for conflict resolution.[37] Both of these articles were written about teams that had been in existence for nine and ten years, respectively. Perhaps these examples of expanded management strategies are an indication that health team theory will mature as experience with fully developed teams increases. Perhaps IHCTs out of their struggle for survival will be more amendable than organizations to appropriately adopting all four strategies.

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INTRODUCTION

PATIENT OUTCOMES OF TEAM CARE

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Issues surrounding program effectiveness are of paramount importance to interdisciplinary (or team) programs. Existing literature cites numerous positive effects of teamwork, including improved efficiency, more comprehensive services, improved continuity of care, improved communication among health care providers, and in general, improved services to the patient. However, much of the literature has concentrated on the study of the health care team and the process by which it delivers care, rather than on the patient as the recipient of care.

There are several reasons for the paucity of team literature as it relates to health outcome measurement, however,one reason predominates. Although it may be relatively easy to define appropriate health outcome measures, it is extremely difficult to relate these outcomes to the effect of teamwork. The explanation of teamwork as the critical factor remains mostly hypothetical.

The challenges presented in measuring the health care team's impact of patient outcomes are addressed in this session. Three research projects report findings attributed to interventions provided by health care teams and the effects of these interventions in the population served. These studies report findings such as: reduction in the number of hospitalizations, improved patient or care-giver satisfaction, and improvement in problems associated with developmental disabilities.

APPLICATION OF DONABEDIAN'S PATIENT CARE EVALUATION CATEGORIES TO A V.A. HOSPITAL BASED HOME CARE TEAM

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The Veterans Administration Medical Center in Memphis, Tennessee is a 933 bed, university affiliated facility with a 120 bed nursing home care unit. The Medical Center serves the Greater Memphis area and surrounding counties in Arkansas, Mississippi, and Kentucky. In 1985 the hospital had 158,551 outpatient clinic visits, admitted 16,908 patients to inpatient units, and discharged 17,049 veterans. Of the total number of discharges, 59% or 10,119 patients were referred to existing continuing care services of the Medical Center. The reality of these statistics is that over half of the patients admitted to this facility are never really discharged from inpatient services but move along a continuum of care which includes a variety of outpatient services.

One of the key elements of the continuing care services offered by the Memphis VA is the Hospital Based Home Care (HBHC) program, which began operation in June 1983. The program consists of an interdisciplinary team of 11 professionals: a physician, 4 nurses, 2 social workers, a dietitian, occupational therapist, speech pathologist, and team secretary. The team is responsible for caring for house bound or bedridden patients living within a 30-mile radius of the Medical Center and requiring medical follow-up. In 1985 the team screened over 200 referrals, admitted 180 patients, made 5,386 home visits, at an average cost per visit of $13.17, and carried an average daily census of 61 patients.

The typical HBHC patient is a house bound, 72-year-old male, living with a family member within 15 miles of the Medical Center and having a fixed income of under $7,000 per year. He has no less than three major medical problems, requires assistance for most of his activities of daily living, receives weekly visits from team members, and will be an active patient in the program for no less than four months.

Each patient admitted in the program is treated within the parameters of a interdisciplinary treatment plan which is developed within five working days after admission to the HBHC program. The team has developed standard treatment plans for each diagnostic category encountered. These standards conform with Thompson's (1982) "optimal achievable results - - that are both cost effective and well documented." Each standard plan is reviewed every 60 days to determine appropriateness of continued HBHC care and to identify new or resolved problems.

The Problem

"A great idea needs landing gear as well as wings" (C. D. Jackson)

Demlo (1982) states that the quality of health care is multidimensional, value laden, and dynamic. In times of increased accountability, reduced resources, and greater competition among programs the need to provide an accurate measure of program effectiveness that addresses these elements is critical to survival. In the case of the Memphis HBHC team no single method was found to adequately evaluate such a complex interdisciplinary approach to the care of the chronically ill geriatric patient. Eighty percent of the patient population for the Memphis program fall in this category. Most early quality assurance activities seemed one dimensional and thus limited and ineffective.

The problem, therefore, was to develop or discover a system of program evaluation that would address the complex elements of Demol's definition within a framework such as the one in which the Memphis HBHC team operates. This challenge would require an extensive search of existing systems and theories to find such a procedure.

The Proposal

> "The man who insists upon seeing with perfect clearness before he decides, never decides." (Henri Frederic Amiel)

After a literature search and numerous consultations with other programs and our own staff, it was determined that, though not perfect, one concept seemed to provide the most promise to answering the evaluation needs of the team. Donabedian's classic categories of health care evaluation seemed a very likely solution to this issue. In his 1966 paper, Donabedian demonstrated that a program could successfully be evaluated by concurrently looking at its structure, process, and outcome. This holistic qualitative prospective would meet Demlo's dimensions and at the same time provide a structure compatible with the specific needs of the Memphis program.

Program Structure

To evaluate the structure of the program we found several measures in place that were considered applicable. The first was the Joint Commission on Accreditation of Hospitals (JCAH). The Memphis team was reviewed in 1983. Policy and procedure documents, staffing guidelines, quality assurance standards, and continuing education activities were evaluated. The program was found to be in complete compliance with JCAH standards. The second instrument was the VA's Systematic External Review Program (SERP) which is designed to evaluate program structure and function. The 1986 SERP team passed the Memphis HBHC without recommendation (See Appendix I).

In addition to the formal measures of program structure provided by JCAH and SERP another indicator of the team's success in this area is professional satisfaction. The Memphis HBHC staff turnover has been significantly lower than that in most areas of the hospital. The interdisciplinary approach has led to numerous individual commendations, awards, and promotions. The latter of which seems to be the only reason individuals leave the program.

Process

Process as a measure of quality seemed especially appropriate to health care delivery by an HBHC team. As a training sight for the VA's Interdisciplinary Team Training in Geriatric (ITTG) program, the Memphis team process has been closely evaluated and critiqued. The team's assessment of success, mutual support, and professional collaboration was evaluated and discussed in a previous paper (Cocke 1985). This paper demonstrated the effectiveness of the Memphis team in dealing with complex problems within a flexible, professional, and supportive milieu.

Process can also be evaluated in terms of output which, for the Memphis team, has consistently exceeded the expectations of planners and evaluators at both the national and regional level. A team the size of Memphis' is designed to carry an average daily census (ADC) of 50 and make 3,800 home visits a year. In 1984, our first full year of operation, the program ADC was 51 with 5,386 home visits and in 1985 the team carried an ADC of 58 and made 5,880 total visits. The current projection for 1986 is for an ADC of 65 with over 6,500 home visits. All this is at a cost significantly lower than other continuing care services at this hospital. (See Appendix II)

Outcome

The final measure of program performance and quality of care is an evaluation of outcome. It was decided that two factors could best demonstrate outcome of HBHC care. The first was to evaluate whether the primary goal of HBHC treatment, to reduce hospitalizations, was being met. To measure this a study was conducted in 1985 using the patient as his own control to measure post- and pre-HBHC incidence of hospitalizations. The population selected for study consisted of the first 15 patients admitted to the program who remained in treatment for one year or longer. Admissions dates to the program varied but the last day of fiscal year 1985 was used as the termination date for the study. The number of days of program participation was used to determine the time to be evaluated in a retrospective charge review. From this the number of hospital days for each period was calculated. This study concluded that HBHC treatment had significantly reduced both hospital stays and admissions. (See Appendix III)

The second measure of outcome to be examined was patient/care giver satisfaction. To evaluate this component a graduate student from the University of Tennessee was employed to conduct a survey of 50 current and former patients and care givers to assess their feelings about the services rendered by the team. This survey concluded that 95% of the people interviewed felt they had received better care with HBHC than they would have in an outpatient clinic, nursing home, or hospital. Every individual interviewed stated that they would recommend the program to a friend or loved one if they became house bound and would themselves want to be treated by the same team. Most of the care givers interviewed indicated that they could not have cared for their loved ones at home without the support of the HBHC team. In all, the interviews demonstrated a high level of patient and caregiver satisfaction with the home health program. (See Appendix IV)

Summary

> "The only nice thing about being imperfect is the joy it brings others." (Doug Larson)

The Hospital Based Home Care (HBHC) team at the Veterans Administration Medical Center in Memphis, Tennessee has been in operation since 1983. Its interdisciplinary team has consistently provided quality patient care within a setting conducive to professional satisfaction and team productivity. The major focus of this paper was to illustrate how a complex multifaceted program could be evaluated using Donabedian's classification system to demonstrate program success and quality of care.

While this study was somewhat limited in scope it is our hope that it may aid others in developing effective instruments of evaluation that can demonstrate a realistic measure of success.

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APPENDIX I
Introduction

HBHC (Hospital Based Home Care) is an extended care program which delivers primary care services, using an interdisciplinary team, to patients in their own home in concert with family and community support. The objectives of the program are:

- To offer functionally dependent or terminally ill veterans an alternative to institutional care by establishing a therapeutic and safe environment in the home.
- To increase the capacity of the medical center to deliver services.
- To reduce the cost of health care by preventing unnecessary hospitalizations, emergency room visits, and other outpatient clinic visits.

Delivery of services in the HBHC program exemplifies the characteristics of primary care. These characteristics include:

Accessibility - the HBHC patient/family has access to the providers of care during the work week and explicit provisions have been made for emergencies occurring during nights and weekends.

Comprehensiveness - the HBHC team is willing and able to treat and manage the majority of health problems arising in the HBHC patient population.

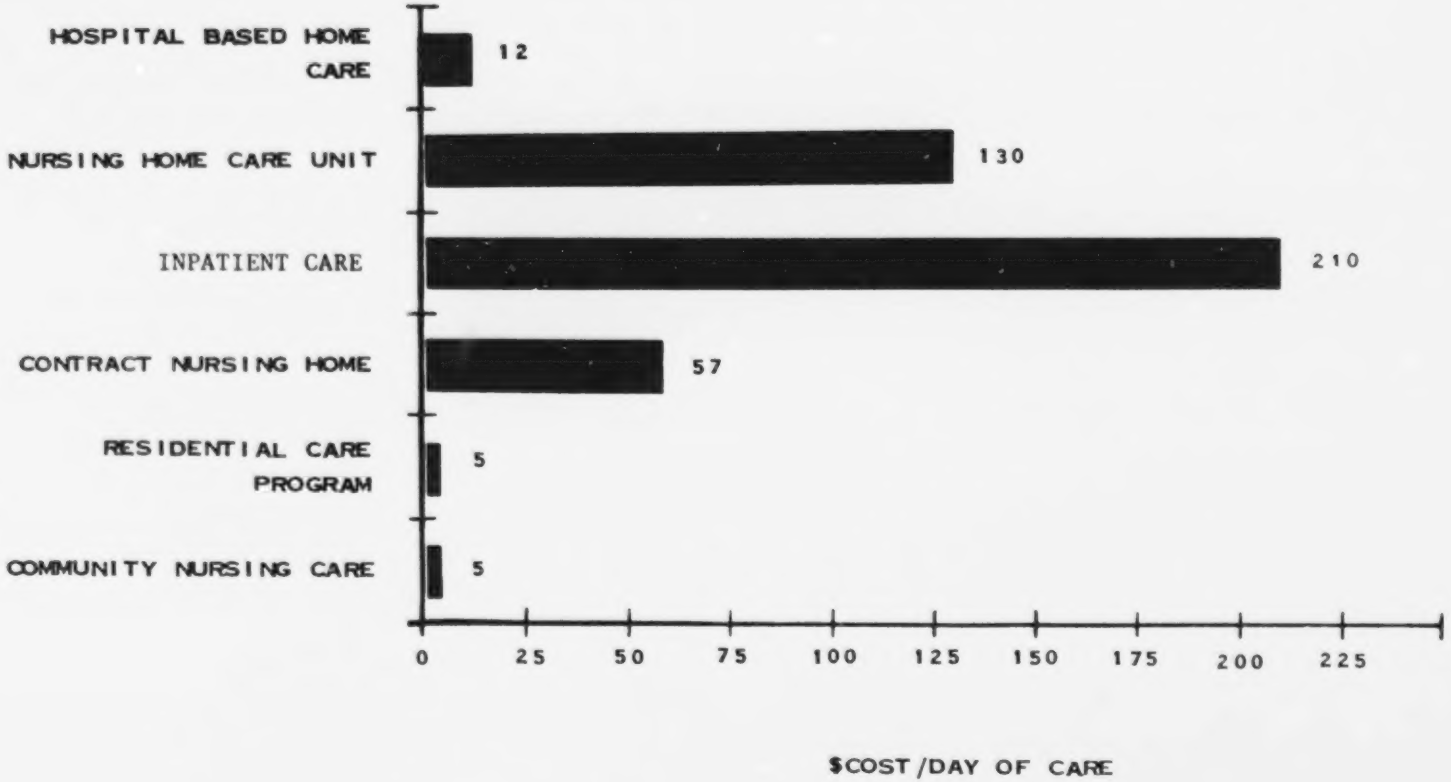
Coordination - when necessary, the HBHC team coordinates the patients' care by referring patients to appropriate specialists and other sources of service (both VA and non-VA), providing pertinent information to and seeking opinions from these specialists, and explaining and teaching diagnoses and treatment to patients and families.

Continuity - regular visits from the HBHC team and complete medical record documentation which is regularly reviewed and used in planning care.

Accountability - the HBHC team is willing to hold itself accountable for care rendered.

The patient deemed appropriate for HBHC is generally a bedbound or housebound patient with either terminal or chronic illness of frailties that accompany advanced age and require long-term or extended care. Patients with good potential for rehabilitation where such services can be provided in the home on a short-term basis are equally appropriate.

APPENDIX II


HOSPITAL BASED HOME CARE
12
NURSING HOME CARE UNIT
130
INPATIENT CARE
210
CONTRACT NURSING HOME
57
RESIDENTIAL CARE PROGRAM
5
COMMUNITY NURSING CARE
5
0
25
50
75
100
125
150
175
200
225
$COST/DAY OF CARE

APPENDIX III

Primary Diagnosis	# of Patients	% of Reduction after HBHC	Pre HBHC Days in Hospital	Post HBHC Days in Hospital
Stroke	8	76.3	427	204
Multiple Sclerosis	3	59.3	141	139
Organic Heart Disease	2	66.0	228	65
Parkinsons Disease	2	63.0	170	66
TOTAL	15	66.1	966	486

APPENDIX IV

Questions	# Responding
(1) Time in HBHC	50
(2) Reason for admission	50
(3) Opinion of HBHC treatment	50
(4) Frequency of HBHC visits	50
(5) Effect on quality of life	50
(6) Comparison of HBHC vs other programs	50
(7) Would you want the same team	50
(8) Would you recommend to friends	50

Corresponding Results for Each Question

(1) Average time in program 1 year
(2) Stroke 28, COPD 5, OBS 5, MS 5, Other 7
(3) Excellent 39, Good 9, Fair 0, Poor 0, No Response 2
(4) Average 2 times a month
(5) Improved 43, No Change 5, Worse 0, No Response 2
(6) Better 47, Same 2, Worse 0, No Response 1
(7) Yes 50, No 0, No Response 0
(8) Yes 50, No 0, No Response 0

Selected Comments

"We could not have survived without the team."
"My husband lived longer and were able to keep him out of a nursing home."
"It's a nice group and very helpful to people who want to stay home."
"They are doing a good job and taking good care of my dad."
"They not only helped my husband but our whole family."
"Wonderful program. I don't know what we would have done without them."
"Doctors, nurses, and social worker very helpful, well rounded, well planned group."
"Didn't do a lot to help him, but it was nice to know someone cared."
"People are very nice."
"They didn't seem to do much."
"Excellent program, the people are wonderful."

GROUP WORK WITH PARENTS OF LEARNING DISABLED CHILDREN: AN INTERDISCIPLINARY MODEL BETWEEN MEDICINE AND SOCIAL WORK

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This paper concerns itself with an attempt to help parents whose children suffer from a learning disability through the use of a parents group. Learning disability, which is also referred to at times as "minimal brain dysfunction," is a particularly difficult disorder because it is usually made up of a cluster of symptoms which may take many forms.[1] These forms might be that of reading or language difficulties; gross or fine motor deficits; behavioral or maturational problems, such as poor impulse control; or perceptual problems.

No one neurologic impairment is exactly like another. Each child's functioning depends upon the mix of a variety of possible symptoms, which exist in an almost infinite number of possibilities and proportions. Therefore, it is possible for a hyperactive antisocial child, and a withdrawn, poorly coordinated, dyslexic child to both be considered learning disabled, even though they present themselves in different ways.

When this type of child begins school two major concerns for parents and educators are behavior difficulties and/or poor school performance. Some children can't match shapes, don't stay in their seats, have temper tantrums or crying spells, can't catch a ball or swing a bat, or experience difficulty grasping concepts. This can result in the learning disabled child seeing his failures, feeling the rejection of peers, and beginning to develop secondary emotional problems as he faces challenges beyond his capabilities. At home his inability to follow instructions or possible hyperactive behavior is often met with scolding or admonition from parents who don't understand what is wrong. For the parents of these children the recognition of their child's disorder produces a critical life transition (the loss of normal child) requiring new demands and new responses. According to Germain and Gitterman, when there is an upset in one's adaptive balance the result is stress. Stress is viewed by them as a "psychosocial condition generated by discrepancies between needs and capacities, on the one hand, and environmental qualities on the other."[2]

These parents can sometimes be faced with inappropriate and unhelpful feedback from physicians, friends, and relatives. Coupled with their own observation of their child's bewildering behavior, they often live in a state of constant frustration, tension, and anxiety. Feelings of helplessness and failure usually emerge along with overreaction, depression, and guilt.

How any one parent or family meets the demands of this life stress is very much dependent upon the presence or absence of environment, such as schools, hospitals, and the quality of interpersonal relationships. The environment and primary relationships can either provide support or be another source of stress. The remainder of this paper will discuss the sources of stress to parents of learning disabled children and will describe the development of a mutual aid group program to meet the needs of this population.

The Agency

The agency setting was a multidisciplinary medically based center for children with developmental disabilities, combining the skills and knowledge of several professions (neurology, psychiatry, social work, etc.). A wide variety of developmental disabilities were served at the clinic, including cerebral palsy, mental retardation, seizure disorders, learning problems, and emotional difficulties. About half of the clients were learning disabled. Each child received an examination by a pediatric neurologist, social worker, and psychologist. Other examinations were given as needed. The findings and recommendations were shared at a multidisciplinary conference, with the parent(s) and child participating.

The major treatment plan focused on special school placement and very little on helping the parent cope and deal with all the other ramifications of their child's situation. Because of this, parents felt isolated and, at times, intimidated by the professional "experts" treating their child. Most became confused and/or frustrated by the flood of information or instructions given them to carry out in the home. Many of these children had accompanying behavioral difficulties which often erupted in school and caused the parents to be called in to respond to "charges." Thus, most parents felt anxious and defenseless against the educational system with which they often had to deal.

Group Rationale and Formation

It was soon discovered that many of these families were being referred to a local family service agency for individual and family counseling. This helped many of these families manage better with the multiplicity of its problems, but it lacked the focus of education and mutual support that these parents needed. As more referrals were made and the working relationship between the two agencies became closer, both administrators and workers began to look at alternative service delivery methods to provide more comprehensive service for these parents.

Keeping in mind that a typical profile of our parents was one of a person who generally felt inadequate and guilty, was usually anxious and un-focused, and had incorporated a "bad parent" image, it was decided that some sort of mutual aid group program was necessary.

Schwartz[3] has written about the mutual aid features of the group experience, the most important of these being the ways that people support and learn from each other during this helping process. The support and incentive for members to reach for difficult themes and explore taboo areas is generated by the group interaction. Through group process the tasks of elaboration and division of problems takes place. Members from their own vantage points can swap examples, contribute to each other's ideas, and explore various facets of their problem area.

In a group we felt parents could share their experiences, feelings, and concerns, and help each other. Their common experiences provided a natural basis for the development of mutual aid, comfort and support, a place where they could recognize that they were not alone in experiencing these painful feelings and self-doubts. We felt that a group would help them with the isolation they felt in the clinic as well as in other institutions (schools) and social networks (neighbors), which reinforced their sense of futility and hopelessness.

It was decided that the group model would be a short-term, closed-ended task centered one. The initial contract would be for six sessions and clients could re-contract for additional sessions. The group was short-term because we felt that clients would be more willing to engage in short-term commitment because many were involved heavily in other service systems which put great stress on their time. The task centered approach was chosen because it would help members to focus quickly and maintain purpose and direction.

In the task centered approach[4] problems perceived by the client are elicited, explored, and clarified by the worker. The problem which the client is most anxious to resolve is normally seen as the primary target of intervention.

Once agreement on the problem has been reached, tasks are formulated and selected in collaboration with the client. A task defines what the client is to do to alleviate his problem. The task represents both an immediate goal the client is to pursue and the means of achieving the larger goal of problem alleviation. In its initial formulation, a task provides a general statement of the action the client is to undertake rather than a detailed blueprint.

Sanction Building

To set up groups in the clinic, the support of the entire staff was needed. We involved staff at all levels in the group formation process; clinic administrators, social workers, doctors, case managers, etc. Most showed enthusiasm about the proposal and agreed that individual intervention at the clinic with clients usually meet most of their daily reality needs, but that there was a great gap in meeting the counseling needs of the clients. The work began with educating the staff about group process, in particular, the concept of mutual aid.

In the groups we hoped that parents would be able to hear from other parents experiencing the same situation. We wanted to create an atmosphere where parents could express and help each other with some very painful material. From this sharing experience we hoped that people could help mobilize each other to deal more effectively within a given situation.

Some workers were concerned about the possible intrusion upon their territorial boundaries. The two specific concerns they had were the demands that would be placed on them with the initiation of these groups and how they would affect the few individual counseling cases they now had. There was also apprehension about the interplay of group and individual work.

Shulman[5] relates to this later concern when he writes that clients may use both individual and/or group help for different issues as they see fit. He sees group discussion enhancing rather than impeding individual sessions because members are given the opportunity to understand how others are experiencing problems and also see that others have fears related to their own taboo areas. These factors may put members in touch with feelings not previously evident and may help members introduce material in their individual work.

Likewise, individual sessions can aid a client to raise an issue in the group. Some material is too personal to begin talking about in a group context. As this material is introduced in individual work and not harshly judged, it then encourages the client to share these concerns in the group.

In regard to the former issues, we failed to sufficiently reach for these concerns initially. This left staff with a very cautious approach. It was not until we reached deeper for these concerns that staff began to express some of their real reservations about the proposal. Once this happened, then the section building process for this program really began.

Contracting

The importance of making a clear, uncomplicated statement of why a group is meeting is contained within Schwartz's[6] definition of contract. The contract should reflect the stake of the group members in coming together, and should also reflect the agency's stake in serving them. The contract should not only reflect both stakes, but also provide a frame of reference for the work that follows. Contract work is not limited to just the beginning of groups but is constantly being renegotiated as the concrete implications of the two stakes become clearer in the events of group life.

From our experience at the clinic, the three most important areas for parents were their child's inability to get along with brothers and sisters, to make and keep friends, and to keep up with school work. These concerns were stated as concrete as possible to allow parents to respond quickly as to their importance.

Another part of the contract was a statement of our stake, which was to try to give parents a place to talk with each other about their concerns involving their children.

After a period of ventilation and sharing concerns we focused the work by identifying several major areas of stress the parents wanted help with during the course of the group. The three major ones were, the relationship to the child, the status of the parent of a disabled child, and familial pressures. The short-term nature of the group allowed only enough time for sufficient exploration of the first two themes. The third area of familial pressures received only cursory group attention.

To give members a sense of the group process, each member was asked to choose a situation in relation to the major themes previously mentioned, that they wanted to improve upon within the six-week period. We hoped the identification of specific tasks would establish a climate within which parents would examine their situations and experiment with new coping behaviors. Parents usually found it easier to identify target problems than to identify tasks on which they could begin to work. The difficulty with task identification seemed to be related to a feeling of being "singled out" from the rest of the members. This seemed to heighten their sense of the uniqueness of their situations.

The major theme of this phase seemed to be the parent's relationship to the child, and the major attempt for task formulation revolved around the difficulty that learning disabled children sometimes have in carrying out multiple tasks.

Work Phase

The parents felt that the most stressful problem area was their relationship to their child. Members talked about their inability to understand the behavior of their children and initially tried to elicit an explanation from the leaders. As we further explored this it became clear that the parents were hoping that the group leaders would be able to identify those aspects of their child's behavior that they feared.

The strongest one that emerged was the fear of no longer being able to maintain self-control (losing to their more "powerful" and demanding children). As they described their experiences we identified their sense of loss of control and helplessness. We attempted to help them gain mastery over these situations by asking each person, as they talked, to describe in increasing detail what they were trying to convey, so that group members could respond appropriately.

Defining observable behavior in specific terms, facilitated the members and our understanding, and facilitated attempts to change maladaptive behavior or to identify ways to avoid conflictive situations. Once parents were helped to describe in detail their participation in a given situation, they were better able to more accurately assess what part they played in exacerbating the situation.

From their discussions specific tasks emerged, examples of which were increasing study time, eliminating temper tantrums, and increasing tolerance for delayed gratification.

Often the evaluation of the situation implied that the parents themselves had to change. Examples of this were establishing consistent rules and limits, responding positively to a child's good behaviors, and encouraging independent functioning.

Sometimes parents did not know how to implement suggestions made. In order to provide them with a repertoire of words, phrases, and feelings, we encouraged role playing as a means of preparing parents. We also strongly encouraged parents to give feedback to the other members concerning their attempts to follow through on their tasks, at the next session.

Although vast changes did not occur within the six-session format around this particular theme, parents did feel better equipped with alternatives to handle problematic situations with their children and did participate in a problem-solving approach. This seemed to prepare them for their second major theme which was the status of parents of a learning disabled child.

To understand this theme it is important to understand that expectant parents wish for a normal child and prepare themselves for parenting along normative developmental lines. When the child is viewed as abnormal, regardless of the age of the child, there is often a period of grief and mourning for the fantasized child. This mourning process allows parents to reach for new ways to respond and adapt to their new demands.

Most of these parents had not given themselves permission to grieve and so at some point experienced feeling ashamed by their children, whether due to bizarre or hyperkinetic behavior, lack of intelligible speech, or general immaturity.

Many felt attached and exposed by family, neighbors, and the school system. They also felt embarrassed in public situations (like shopping) where their children did not act normally. These situations triggered their feelings of shame and then guilt for that feeling. They were conflicted about how to react, often responding unnecessarily harsh with their children.

Sessions such as these provided the group members with an accepting and safe atmosphere in which to share their innermost feelings. Each encouraged the other to find hidden and untapped strength. The group's compassionate support draw them closer together. This support and acceptance encouraged each of them to look at their own participation in the situation. This enabled members to recognize that they needed to precipitate some changes in their relationships with their children.

In the area of familial support (particularly spouse involvement) the members felt that their families were not emotionally available to them and/or involved sufficiently in their child's daily life. They usually felt abandoned and angry. This general feeling of anger had a spill-over effect in relation to how they treated their children. Germain and Gitterman[2] refer to this process in their description of the family as a system of interacting parts where pressures and adaptive demands exceed adaptive limits.

Some members began to reflect upon their own identities, questioning their personal goals and future. Some became more assertive about their own needs and recognized that they had to find a balance between their own needs and those of their families. The group helped some parents to implement some ideas they already had.

Conclusion

In analyzing the results of these groups (through the use of questionnaires distributed to group members and by review of process recordings done by the co-leaders after each session), it was found that parents who finished the group process experienced greater coping abilities in managing their child's disability. They also mobilized resources better in terms of coordinating services that were necessary for treatment, and followed through more thoroughly with the professional staff then parents who were not in the group.

The short-term task centered approach had facilitated a new understanding of their situations and had also given them some concrete, practical suggestions for behavior change.

This program demonstrated the effectiveness of an interdisciplinary approach in servicing these parents. It provided the therapeutic support of mutual aid among parents and also developed a more comprehensive treatment approach for these parents than the single approach that either agency was providing.

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INTERDISCIPLINARY RESEARCH WITH DOWN SYNDROME CHILDREN

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Objectives of Proposed Study

The proposed study builds on the recent research into the relationship of motor, reflex, and linguistic development to sensorimotor development in Down syndrome children. If this relationship exists, an interdisciplinary therapy approach - in which motor, reflex, language, and sensorimotor integration were worked on simultaneously in a continuum of development - would decelerate the gaps expected in these modalities more effectively than would traditional therapy models. Furthermore, if vestibular stimulation improves sensorimotor integration, it would follow that an improvement in motor and language skills would result, because the systems are interdependent. As a sub-objective, the proposed study examines multidimensional stimuli of the vestibular system such as spinning, swinging, rolling, and rocking and its effect on pre-linguistic, motor, reflex, and mental development.

Hypotheses:

1. Interdisciplinary therapy (Occupational Therapy and Speech-Language Pathology) for Down syndrome children is preferable to traditional therapy models in which the child receives therapy from each discipline independently. An interdisciplinary model is tested.

2. Vestibular stimulation shows significant improvement in pre-language, motor, reflex, and mental development of Down syndrome children when it is incorporated into this interdisciplinary therapy model.

Review of the Literature

The treatment of Down syndrome children has undergone drastic changes in recent years. Not long ago the standard pediatric advice was for early institutionalization. The birth of such an infant was considered to be a major tragedy, and the baby was removed as soon as possible. The changes began with the President's Panel of Mental Retardation in 1963 which followed the World Health Organization Report in 1954. Both of these recommended home care for the Down syndrome child. Since then, social changes in this area have been massive. It is now expected that Down syndrome infants will be raised in the home and institutionalization is thought to be a last resort.

Down syndrome is the most common chromosomal anomaly, occurring in 1 in 600-800 live births (Nyhan, 1983). A physical feature of Down syndrome, among many others, is low muscle tone (hypotonia) causing hyperextension of joints (double jointedness). Virtually all Down syndrome children have language deficits (Dodd, 1975). Children with Down syndrome remain small and their physical and mental development is slow (Smith, 1982; Stoel-Gammon, 1981).

Down syndrome has received particular attention from researchers in the last decade. A number of studies that have implications for therapy have been conducted in the fields of occupational therapy, speech-language pathology, and medicine. Three basic premises are important for the proposed study: 1) there is a relationship between the central nervous system (sensorimotor) development and pre-linguistic development; 2) the gaps in development between Down syndrome children and normal children appear around the first birthday when speech and walking are expected (the developmental gap becomes increasingly wide as age increases); and 3) there is a relationship between vestibular stimulation and the development of language and motor skills.

Summarizing implications for therapy from the literature led the researchers to conclude: if language development is dependent upon sensorimotor development, then therapy with Down syndrome should take this premise into account in setting goals, structuring activities, and measuring progress in a team approach.

An additional implication from the research reviewed is that motor development of Down syndrome children benefits from vestibular stimulation regardless of the etiology of the anatomic differences from normal children.

Methods

Nine children ranging in ages from 15 months to 54 months were studied for 6 months. A crossover design was used to determine the effects of vestibular simulation and interdisciplinary therapy on language and motor development versus traditional therapy.

The selection of this design was made because it is: 1) statistically sound as a pilot study, 2) possible to replicate, 3) possible for all subjects to receive treatment, 4) controlled for differences of individuals, and measures the effects of the individuals, and 5) the subjects are used in each experimental condition, therefore, it actually increases the number of observations per treatment periods. The two groups were randomly divided into five and four subjects each. For eight weeks, the first group received vestibular stimulation and interdisciplinary therapy while the second group received traditional therapy. A washout period of six weeks was given before the groups were crossed over for the final eight week session. Interdisciplinary therapy was defined as a speech pathologist and occupational therapist working either simultaneously or individually with a child using specifically designed activities to meet both disciplines' objectives. Objectives were jointly decided on by the speech and occupational therapist from standardized tests administered by experienced professionals, blind to the study. Individual treatment plans were devised by each respective discipline and then explained to the other discipline; activities were selected or created to fulfill objectives for both disciplines.

Traditional therapy was defined as the occupational therapist and speech pathologist working separately, in therapy for 30 minutes with the children. Objectives were devised from standardized tests. Communication regarding therapy was done via written reports, or in meetings but no observation of therapy or joint interaction took place during therapy. Objectives for motor and language development were the same for the children in both interdisciplinary therapy with vestibular stimulation (ITVS) and traditional therapy (TT). No vestibular stimulation was given in the traditional therapy. The selection of ITVS versus TT out of a variety of combinations among IT, VS, and TT was made because it represented the strongest contrast of therapies and, it was surmised, would demonstrate the strongest results.

The children were treated by three registered therapists having master's degrees and two graduate assistants. The graduate assistants both had previous experience with Down syndrome and preschoolers. One graduate student was in the master's degree program in occupational therapy and the other was in the master's degree program in speech pathology.

Results

Preliminary analysis of data indicates that interdisciplinary therapy with vestibular stimulation may be better than traditional therapy in terms of gross motor skills development. Overall conclusions of speech development indicated that traditional therapy might be better than interdisciplinary therapy with vestibular stimulation in terms of overall speech development.

Discussion

The results are influenced by the small number of clients, the diversity of ages (age span 15 months to 54 months), learning from the test (although this was controlled for by selection of the crossover design).

The strong features of the design were that nine children began and completed the study. The evaluators were blind to the study. The selection of the crossover design was made because it is statistically sound for small populations, controls for individual differences, measures the effects of the individual, provided all the children with treatment, can be duplicated, and subjects are used in each experimental condition; therefore, it actually increases the number of observations per treatment condition.

Empirical observations made were that children with articulation difficulties demonstrated by Down syndrome at three and four years of age require more one-on-one therapy in isolation in order to assure that fine details are mastered. For stimulating language of Down syndrome children under three years, interdisciplinary therapy was more successful. The children are actively engaged in movement and at the same time stimulated to use language. The result was that children used more active language than in traditional speech therapy which consisted of primarily seated activity working on speech sounds.

Overload of sensory stimuli was observed in the ITVS group. Children with Down syndrome become distracted by language when actively engaged in a fine motor activity. What did seem to work was requiring language before gross motor activity, i.e., "one, two, three, kick," then having them kick the ball, as opposed to the therapist verbally directing them.

The duration of the structured vestibular stimulation did not elicit nystagmus in many of the children. Additional stimulation was added that fit within the design because it was felt the increased stimulation would produce more integration.

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INTRODUCTION

TEAMWORK IN GERIATRICS

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The need for interdisciplinary teamwork is particularly evident in geriatrics. Many older adults have complex and multiple health care problems. For some, a problem such as substance abuse is hidden and overlooked. Other older adults experience neglect because of ageism. Students of diverse disciplines have the opportunity to learn about the social, medical, and individual dimensions of geriatrics by partici-pating in the interdisciplinary team.

The first paper in this series is Thomas DiMatteo's "Reaching Out to the Elderly Substance Abuser: An Interdisciplinary Model Involving Education, Early Intervention, Treatment, and Referral." Following a discussion of alcohol abuse among the elderly, DiMatteo discusses a program in which a collaborative relationship was formed among health care planners from offices of aging and substance abuse agencies, alcoholism counselors from a private agency, managers of apartments for the elderly, and social workers from a county program for the elderly. Coordination among the various services facilitated the identification and treatment of elderly needy services.

The second paper, entitled "Collaborative Care of the Older Adult: Role of the Preceptor in Interdisciplinary Team Training," describes the Interdisciplinary Team Training in Geriatrics (ITTG) program at the Veterans Administration Medical Center in Coatesville, Pennsylvania. Here the preceptor functioning as a team member serves as role model to the preceptee. The roles of the psychologist, social worker, occupational therapist, nurse administration, and nurse practitioner preceptors are described. The preceptors convey a positive attitude toward teamwork, participate actively, and by example teach preceptees how to collaborate successfully with professionals of other disciplines.

The third paper is Nancy Wuggazer's "Weekly Interdisciplinary Patient Care Rounds," in which a system of interdisciplinary rounds established at La Grange Memorial Hospital is described. The rounds were established principally to provide a mechanism for early identification of patients with complex needs and to facilitate discharge planning, but it also promoted teamwork and saved professionals time. Outcomes of interdisciplinary rounds were analyzed and feedback has been positive.

REACHING OUT TO THE ELDERLY SUBSTANCE ABUSER: AN INTERDISCIPLINARY MODEL INVOLVING EDUCATION, EARLY INTERVENTION, TREATMENT, AND REFERRAL

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Introduction

Among the host of significant problems experienced by the elderly, particularly since the mid-1970s, alcoholism has been receiving an increasing focus. This emerging realization has been well documented by many sources (Carruth et al., 1975; Dunlop, 1979; Schuckit and Miller, 1975; Glassock, 1979; Zimberg, 1978; Zimering and Domeischel, 1982).

On the other hand, Cahalan et al. (1969) and Clark and Midonik (1982) have contended that alcohol abuse and dependence are less prevalent among the elderly. These investigators have suggested four explanations for the apparent low rate of alcoholism in the elderly:

1. The older birth cohorts never attained the levels of alcohol abuse/dependence of the younger cohorts,
2. People drink less as they become older,
3. Alcoholics die early, lessening the number of alcoholics among the surviving aged population,
4. The elderly under-report their alcohol problems.

Given that the rate of alcohol use among the elderly is generally lower than that of the general population, nevertheless, the rate of alcoholism and problem drinking is about the same, and may be higher than the average among clinical populations.

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) estimates that approximately 10 percent of the elderly male population and 2 percent of the elderly female population are heavy or problem drinkers. Based on 24 million older people living in 1980, the estimates of those experiencing alcoholism and problem drinking could range from 1 to 3 million.

There is an extremely wide variance in the estimates of the prevalence of alcohol problems among the elderly. This variance is attributable, in part, to a lack of consistency in the literature relative to what constitutes "elderly" and, in part, to what constitutes alcohol problems in this segment of the population. Some investigators define the elderly to be individuals 55 and over; others regard those over 60 as elderly. Some researchers study a wide range of alcohol-related problems, while others investigate chronic alcoholism. Nevertheless, in the face of such ambiguities, those of us in the field of gerontology must be concerned about the aspects that tend to make the elderly susceptible to problems related to alcohol. Demographic data suggest that the problems of alcohol abuse among the elderly will increase at least in proportion to the population growth of that sector. As Brody (1982) has stated, while fewer older people drink and average consumption declines, four factors that promote alcohol abuse are noted:

1. Retirement, with its accompanying boredom, role status change, and income loss.

2. Deaths among relatives and friends and the realization that more deaths are imminent.
3. Poor health.
4. Loneliness, especially among elderly women.

Untoward responses to these problems include not only alcoholism, but drug abuse as well. Dans and Kerr (1979) mention that alcoholism is the second most frequent cause for admitting elderly patients to a psychiatric facility.

The older problem drinker has special needs which generally are not being met in the present alcohol treatment delivery system. There is a paucity of treatment facilities that deal with the particular needs of the aged.

Recognizing the problem has not been easy, and the making of a differential diagnosis of alcoholism where the elderly are concerned creates some serious difficulties. Dunlop (1979) has stated that alcoholism is frequently masked by symptoms it shares with the aging process and adverse drug reactions. Such things as confusion, clouding of sensorium, disorientation, recent-memory loss, slowed thought process, depression, tremors, muscle incoordination, inflammation of joints, gastritis, hypertension, heart arrhythmia, anorexia, and lessened ability to respond to stress are commonly and erroneously viewed as an unavoidable part of growing old. Alcohol's effects are therefore couched and the possibility of therapy and improvement overlooked.

Further, Dunlop (1979) addressed the issue of attitudes. Referring to elderly alcoholism as a "double negative," she discussed the hopelessness and helplessness, the general mind-set toward the aged client who happens to have a drinking problem. Alcohol treatment personnel are often discouraged and pessimistic about their elderly clients. Providers of services to the elderly are put off by and avoidant of possible alcoholism among their clientele. This outlook is shared by the victim and his/her family, as well as by social and health agency staff. The implications for treatment potential are legion. Failure to recognize the problem, in concert with the double negative attitude toward the elderly, compounded by alcoholism, are all critical reasons why the problem is not being identified and the aged are not being referred for therapy.

As Zimberg (1978) indicated, the difficulties associated with providing services to the elderly in general will also pertain to elderly alcoholics. Many individuals will be either unable or unwilling to leave their homes to attend outpatient activities or to actively partake of group activities when they get there. As a result, part of any comprehensive continuum of care for the elderly must consist of outreach an case-finding activities. Aged individuals reluctant to be part of group activities because of their life-long lifestyles and personalities have to be handled individually in an attempt to understand how involvement in some phase of a program might be generated. The same holds true for the elderly alcoholic. The challenge then facing the professional community health care community is to offer a viable service that will be utilized.

In my previous position, I was a county drug and alcohol program director. In that capacity, I had responsibility for the planning process, which included an assessment of needs for a bi-county region in northeastern Pennsylvania where the population of elderly exceeded 21 percent. Upon review of client census data, however, results indicated that despite such a high elderly concentration, only 3.5 percent of the total client population were elderly. We inferred from the client census data that the elderly substance abusers in our locale were being underserved. This inference was based on the recognized assumption that alcohol abuse among the elderly is a social/medical problem of considerable magnitude, on the basis of the disproportionately high density of aged in our region, and on the basis of the local treatment data, which reflected so few elderly clients.

In the case of elderly clientele, agency services may not have been utilized in an earlier lifestyle. Consequently, it may be difficult for them to begin using the services of an agency in their old age. If staff over-identify with agency norms, rather than attempt to understand individual client needs, they then may miss the target group whose norms are different.

Grotjahn (1978) has discussed a nontraditional approach to direct service delivery to the elderly. Although not specifically for alcoholic clients, Grotjahn's suggestion furnished the impetus for the design of our program. He discussed teams of experts with and without medical background and training, who would go to the homes of the elderly and conduct group sessions there. The intended function of these teams of therapists was to establish group communication. The notion of sending a trained alcoholism counselor to the homes of suspected alcohol abusers to engage in an individualized session was a modification of Grotjahn's suggestion.

In response to a local Office on Aging Request for Proposals (RFP) for counseling services for the elderly, I submitted a proposal dealing with three components:

1. Provision of on-site diagnostic evaluation.
2. Provision of on-site counseling/referral.
3. Provision of consultation to caseworkers from the Office on Aging.

According to the proposal, a counselor from a local outpatient drug and alcohol (D & A) agency would be available to accompany case-workers from the Office on Aging to conduct diagnostic evaluations at the residences of elderly clients whenever reported cases of suspected alcohol/other substance abuse were brought to the D & A agency staff's attention. This personalized service was intended to respond to the specialized needs of the older client, rather than leaving him/her to adjust to the services of a particular agency.

Further, after initial evaluation, and contingent upon individual circumstances, ongoing treatment would be continually provided at the individual's residence.

Although these services were made available to the general elderly (60+) population, by agreement with the local Office on Aging, certain subgroups of the elderly had been "targeted for priority consideration. These were:

1. Individuals 75 years of age or older.
2. Individuals who live alone and/or who lack adequate social supports.
3. Individuals who are disabled.
4. Individuals living in inadequate housing.
5. Minority individuals.

6. Individuals with incomes below the poverty level as defined by the United States Bureau of the Census.

Results

Client status relative to disposition of referrals as well as treatment outcome was assessed over two contract years. To summarize the results, 53 clients received a total of 297 outpatient counseling sessions. Twenty-four (45 percent) had completed treatment and were reportedly abstaining from alcohol. This information was obtained from counselor observations, client self-report data, and feedback from managers of highrises for the elderly, as well as from other residents in the apartment complexes. Seventeen clients (32 percent) had completed treatment and reported some use of alcohol. Six individuals (11 percent) were discharged from treatment and continued with heavy use of alcohol. One client (2 percent) was still active in treatment and reported continued heavy use of alcohol. Two clients (4 percent) were still active in treatment and abstaining from alcohol. Three individuals (6 percent) were deceased.

Based on individualized needs, a variety of treatment modalities were employed. Nineteen of these clients (36 percent) were treated on an outpatient basis only; another 19 (36 percent) required inpatient detoxification treatment before the outpatient counseling could take place; two clients (4 percent) were referred to a residential drug and alcohol rehabilitation facility; eight clients (15 percent) were referred to a medical hospital; and five clients (7 percent) were referred to nursing homes.

The diversity of treatment environments—drug and alcohol, medical, and geriatric—underscores the need for fostering allied health relationships. This elderly outreach effort seems to have been instrumental in furnishing a critical intervention service. Feedback from both caseworkers and planning/supervisory staff from the local Office on Aging had been very favorable. This paper describes a successfully coordinated education and outreach effort involving both the public and private sectors. In addition to the on-site diagnostic evaluation/counseling, consultation/education opportunities for cross-fertilization were plentiful. The drug and alcohol resources afforded opportunities for caseworkers from the Office on Aging to enhance their awareness of substance abuse. Conversely, training resources and workshops from the Office on Aging were made available to alcoholism counselors to enhance understanding of issues relative to the aging process.

In the preparatory stages of the project, consciousness raising in the community was effected by the training of managers of high-rise apartments for the elderly regarding the scope of the problem of substance abuse among the aged. In preparing for this training, collaboration was successfully effected involving health care planners from the offices of aging and drug and alcohol abuse, drug and alcohol clinicians from a private agency, social workers from a county-funded program for the elderly, and the managers of apartments housing the elderly.

During the present era of ever-constricting budgets for most publicly funded human service programs, the need for closer coordination among existing services seems imperative in the interest of maximizing the resources of established agencies. In the process of coordination, a good deal of both communication and cross training has resulted, so that the financial and personnel resources of both networks have proven to be complementary.

Despite its modest beginnings, the project demonstrates that such programs are readily replicable on a larger scale with existing resources.

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COLLABORATIVE CARE OF THE OLDER ADULT:
ROLE OF THE PRECEPTOR IN INTERDISCIPLINARY TEAM TRAINING

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Introduction

The role of preceptor has many challenges within a health care setting. Providing positive clinical experiences for aspiring professionals who come from an academic program, in the midst of the routine demands placed upon a practitioner who works within a multidisciplinary health care setting, can often create tensions. It is particularly challenging for those in a geriatric setting with the multiple health care problems frequently associated with care of older adults.

Dealing with the health care needs of the rapidly rising elderly population requires the services of many professionals. This is even more critical in an age of specialization, increased scientific technology, expanding life spans, and a proliferation of new health care professionals all seeking to provide health care services for the older adult. The preceptor who seeks to develop meaningful learning experiences in such a clinical setting must find a way to balance all these ongoing demands while offering creative and positive learning opportunities for the preceptee. Collaborating with other disciplines regarding the health needs of geriatric patients can provide such opportunity.

This paper will discuss the challenges of the preceptor role in a VA Medical Center geriatric setting in Coatesville, Pennsylvania, as seen from the varied perspectives of faculty team members in an innovative Interdisciplinary Team Training in Geriatrics (ITTG) program. It was designed by the VA to address the needs of a growing aging veteran population, but can be adapted to teams in a number of health care settings. The ITTG program is intended to help the preceptor develop increased collaborative skills in an interdisciplinary team while imparting those same skills as a role model for the preceptee within each of the core disciplines represented on a geriatric health care team.

The ITTG program provides several features designed to attract high-caliber professionals to act as preceptors in a clinical setting for the older adult. Since this added responsibility can produce role strains from time and energy demands, as well as competing administrative pressures, it is important to create a supportive educational program that will be able to maximize learning and encourage professional growth for both preceptor and preceptee. VA funding sources make this possible, with the emphasis on designating specific allocations for training stipends in specified educational programs for those pursuing a career in health care of the elderly. Clinicians of professional excellence and teaching competency within their respective disciplines,, in the field of geriatrics and gerontology, are encouraged to participate as preceptors.

One of the ways in which the ITTG program supports the preceptor, who seeks to provide a meaningful learning environment for the preceptee, is by developing a collaborative didactic component for ITTG trainees who rotate through the program through the academic year. Not only do a variety of disciplines learn about one another's profession, and its contribution to the health care team for the older adult, but preceptors have an opportunity to share their own professional training and experiences in the interrelated fields of health care and aging issues, geriatrics, and gerontology. This joint effort of participating in a regular teaching cycle for ITTG allows staff and students alike to receive an enriched educational opportunity, shared with the various disciplines that participate in the program.

Interdisciplinary development is promoted through the application of small group training interaction techniques; emphasizing communication skills, problem solving, decision making, and conflict management. By providing a model of an interdisciplinary collaborative atmosphere within group session, team member preceptors experience the dynamics of group process and their own individual reactions when working in a group session. There are feedback opportunities within the group, through the use of videotape reviewing, and supportive analysis with the assistance of a group leader. These techniques are based on principles embedded in the literature from group dynamics, systems and communication theory, social psychology, and social learning theory. Professional growth in self-awareness and interactions with other disciplines are enhanced in a positive group experience, with opportunities available for developing leadership skills to be applied in patient care team meetings.

Benefits to be gained from these experiential training workshops are threefold. They consist of: (1) helping preceptors develop greater skills in carrying out their own professional roles on the team more effectively; (2) preceptors demonstrating greater understanding and mutual respect for other disciplines with whom they must collaborate when striving for top-quality patient care of the older adult; (3) preceptors offering positive role models for their respective preceptees to learn from while working through patient care issues within an interdisciplinary team milieu.

ITTG training stipends enable the preceptor to recruit new preceptees to geriatric settings more successfully. For example, it becomes far more influential for a gero-psychologist to advocate for psychology intern participation on a geriatric ward when funding stipulations are cited as grounds for requiring placement on a geriatric ward. This requirement is intended to give primary focus on the special needs of aging veterans. Often, what begins as reluctant participation transforms into enthusiastic learning when an interdisciplinary team training in geriatrics rotation is experienced directly. The combination of didactic, experiential, and clinical practice components provides benefits to both preceptor and preceptee. Ultimately, the quality of care for the older adult patient is the major beneficiary of this integrated approach to learning; offering resources such as funds for consultants, training materials, and travel to professional conferences to present collaborative projects as exemplified by this paper.

Administrative goals are not necessarily congruent with clinicians' goals. Hence, the ITTG program also supports faculty staff members who need to advocate for their teaching roles. When learning goals need to be upheld, the advocacy role of the ITTG Coordinator is used to empower the preceptor by providing structure regarding management's demands on the preceptor's and preceptee's time. Full cooperation and support from top-level administrative staff is necessary in order to assure adequate management support for the ITTG programs. These cooperative efforts help to foster optimum learning for those preceptees who are being prepared for careers in health care for the older adult.

The remainder of this paper is devoted to contributions by ITTG preceptors who will share their own perspectives regarding the program and their roles in educating new candidates to their respective disciplines.

The Psychologist Preceptor

The fact that preceptors serve as role models cannot be over-emphasized. To that point it is important that preceptors engage in collaborative efforts. One successful example of this at CVAMC is a preplacement group co-led by a psychologist, head nurse, and a social work student. This group demonstrates several aspects of interdisciplinary team functioning. First, and most obvious, is that it demonstrates that different disciplines can collaborate on a single project. More importantly it demonstrates that in interdisciplinary teams all disciplines feel a sense of responsibility for all facets of patient care. For example, placement which from a traditional point of view would only be of concern to social work, now is also a concern of other disciplines, in this case psychology and nursing, and a legitimate area for expanding efforts. Furthermore, the group demonstrates interdisciplinary team functioning. After each session, the dynamics of the group are discussed and group techniques are taught by staff of one discipline to students of another discipline.

It is important that the preceptor, as role model, visibly contributes to the interdisciplinary team function and training. This includes readily volunteering to take part in the didactic and experiential team training sessions as both teacher and participant. The power of this role modeling is affirmed with every new rotation of students. New students often comment on how "different" the interdisciplinary team is from other teams they have observed in that everyone readily volunteers for assignments during team meetings. Again, without exception, the students themselves develop this attitude of willingness to volunteer or perform team duties before their rotation is over.

In addition to modeling interdisciplinary collaborative efforts, preceptors also encourage their students to collaborate with students of other disciplines in shared projects. To this end, we use group therapy and other projects to be jointly undertaken by students from a combination of disciplines.

It has been the experience at CVAMC that these joint student projects work well. Perhaps their success is in part due to the lack of competitiveness which graduate students often feel toward graduate students of their own discipline. These feelings do not appear in evidence in our interdisciplinary student projects.

A major challenge to preceptors in our interdisciplinary geriatric program is that of providing students with knowledge and expertise in both geriatrics and interdisciplinary team training. The success of this endeavor begins with a good orientation for students to these areas. For example, psychology students may be coming to this geriatric team training rotation from a rotation on substance abuse or post-traumatic stress syndrome programs which have very active group therapy sessions. To then be faced with a group of geriatric patients who may be withdrawn and may not even be able to assemble itself without the physical help of the therapist is a very new experience. Reorientation of the student to the skills and attitudes pertinent to a geriatric group may be accomplished by the skillful manner in which the therapist actually assembles the group. This specific approach to the needs of the elderly helps the student to expend energy in the task of learning to work with groups without becoming frustrated in the process.

Similarly, successful orientation to functioning within a team is also helpful in maximizing the student's commitment to learning and applying team concepts. An orientation that we have found helpful is one which involves students learning about themselves. We accomplish this by administering the Myers-Briggs Type Inventory to the students. The results are used to indicate what the students' strengths are as team leaders and team members as well as what skills someone else might need to bring to a team. Following such an orientation, students appear more open and interested in the variety and complexity of team dynamics.

One aspect that needs to be addressed for future study is the potential for stress factors that could affect the preceptor role model. This pertains to the experience of being a preceptor in an interdisciplinary group with the possibility of conflicting priorities that surface at times. Every position within an organizational setting has the potential for stress originating from differences in priorities of management versus the individual clinician's priorities as a professional.

Serving on an interdisciplinary team adds a third dimension to this stress: namely, the priorities of the interdisciplinary team which may be different from both an individual's or management's priorities. The more identified a professional is with an interdisciplinary team, the more the team's priorities will be of influence. The potential for stress could be even greater if the team's priorities differ from the individual's priorities or management's priorities. However, one of the strengths of a well-functioning interdisciplinary team model is that the team recognizes and deals with the team issues when perceived as stress. Hence, although being a preceptor in an interdisciplinary program may engender problems such as stress, it also provides a mechanism for addressing the problem. For example, with respect to the above-mentioned problem of stress, we at CVAMC, with one of our consultants, are actively studying the perceived differences in priorities of team members, the interdisciplinary team, management objectives, and the stress which they engender.

The Social Worker Preceptor

The graduate-level field placement experience has traditionally been viewed as essential for educating practitioners in applying knowledge, values, and skills in a clinical setting. Clinical learning occurs even though some areas of tension are found in efforts to satisfy school and agency needs.

Students have benefited from this field training tradition because serious effort has been made by preceptors to bridge the worlds of academic discipline on the one hand with practical agency needs and demands on the other. In the case of providing multiple services for older patients, this cooperative spirit is extended to working with several other disciplines within a geriatric setting.

Schools of social work symbolize the science of social work education; field placement agencies symbolize the art of helping and nurturing persons in need. Highly structured educational systems focus learning on the science of offering assistance, while social and health care agencies focus their training on the art of helping, nurturing, and therapeutic relationships. Combining educational standards with the application of clinical skills is especially valuable for those practitioners working in a geriatric setting.

The preceptor of ITTG trainees uses this balance, including skilled offerings of guidance and learning within an interdisciplinary model. That is, the science and art of the social work profession are to be learned in interdisciplinary team work and include values greater than those identified by the separate disciplines within the team. Accordingly, the role of the preceptor is crucial. The preceptor helps the social work student learn social work values. Additionally, the preceptor must be able to help the student learn what social work means in the context of an interdisciplinary team.

This kind of teaching and learning is no small task. Social work students come to this experience usually highly motivated to help older persons. However, their approach to learning is typically couched in a set of myths about aging and aged persons. Most schools of social work do address the matter of myths about the elderly in our society, but the discoveries which social work students make occur most often in the agency or health care setting. It is at this juncture that the role of the ITTG preceptor becomes so critical. The preceptor, as one member of the treatment team, helps the student move from myth to reality in his or her clinical work with older persons in need.

Furthermore, the social work preceptor must recognize that the myths about the aged and aging center around something more than simply the data and facts of older adult life. Myths also center around the helping process itself. Social work students frequently come to the agency with a strong will to help. This will to help is welcomed. However, the preceptor must also help the student recognize myths of help-giving in isolation from helpers in other disciplines. The student often sees the helping relationship as strictly one to one: narrow and focused in a one-way flow of energy from helper to client. The role of the preceptor aids the student to experience helping in the context of interdisciplinary work. Growth on the student's part takes place best when the social work preceptor knows clearly his part in the team. The student will learn more effectively when the preceptor is quite clear about the larger whole of the team.

Another myth about helping to which social work students seem especially prone is the idea that helping is equal to controlling. This is particularly true when extending help to older persons in need. There is an impression that the helper is the strong, controlling person, while the older adult client is frail and must be dominated, directed, and controlled. The reality is that the professional helper recognizes that the helping process is more subtle and profound than simply control and domination. The helping process includes choice, relationship, and mutuality. It is this reality about helping that the preceptor shares with the student in the context of interdisciplinary team collaboration.

Ultimately, myths about the older adult and aging, individualistic helping and control or domination, will give way to fuller realities as the preceptor in social work shares the larger picture with the student. The student relates to a larger picture of the team context within which ITTG members work. It is not simply the two-times-per-week, 9:00 to 11:00 a.m. meeting attended regularly. It is also the milieu of the unit, the informal ties we experience with other team members and disciplines, and the social and human commitments experienced within the agency setting where we work. The preceptor of social work students must see and know this larger reality and be able to share this larger whole with the learning student.

The Occupational Therapist Preceptor

Supervised clinical experience is vital in occupational therapy. The clinical preceptor can provide learning opportunities for developing skills, establishing areas of strengths and weaknesses, and providing proper setting for testing these skills.

Academicians expect that clinicians will focus on data gathering from observation, as well as evaluation, implementation of treatment planning and communication skills in treatment settings. Daily performance in these areas is essential. Appropriate assessments in treatment planning and the follow-through of treatment and readjustment goals must be documented accurately. Observations by the clinician preceptor are necessary to determine the student's capacity, clarify learning, maximize the student's functioning, and assure successful patient outcomes in treatment. Such preparation allows the student to develop into a skilled clinician. A geriatric setting often has difficulty attracting students. Prestige is traditionally low, practitioners usually receive less salary and resources than in acute rehabilitation, and, in many settings, rehabilitation of the elderly has not even been considered. These problems are compounded when the disabled elderly are dependent upon institutions or family care-givers for total care. With the influence of DRGs (Diagnostic Related Groups), the elderly patient is often seen only briefly in rehabilitation and then discharged with little follow-up care. Finally, treatment of the elderly in rehabilitation is even more complex with involvement of multiple diagnoses.

Although considered costly, rehabilitation can result in improved self-care and mobility, thus resulting in more independent functioning for the geriatric patient who gains satisfaction in controlling his or her environment. The preceptor models these basic skills in observation and communication, providing a positive learning experience within the geriatric setting.

An interdisciplinary approach is nowhere more vital than in working with the elderly. They are more likely to experience multiple disabling conditions and combinations of acute and chronic conditions which complicate return to premorbid functioning. Symptoms vary. Changes in sensation and perception cause symptoms to be perceived differently. Environmental changes can be confusing or even life-threatening. A group of experts who can communicate about evaluation, treatment, and prognosis in an interdisciplinary content assumes quality care for the patient.

In dealing with many other disciplines, it is possible to learn about approaches to evaluation and treatment systems, beyond one's individual training and experience. The ITTG program encourages awareness of values and strengths a patient may possess, not apparent to one's own philosophy or training. The GEU (Geriatric Evaluation Unit) at Coatesville Medical Center offers many opportunities for growth in functioning provided through didactic and experiential presentations. This interdisciplinary program focuses upon improving clinical knowledge of the elderly, as well as focusing on personal and group development skills. The interdisciplinary team development process focuses upon team building and support. It also promotes communication for implementing institutional and treatment goals, while improving personal satisfaction for team members. Team analysis allows opportunity for increased insight into personal style and techniques that can enhance goal accomplishment. Changes in team functioning have been possible through this mechanism. Team leadership, management, and support are perceived and presented as shared functions, through informal and formal mechanisms.

The role of the preceptor has a powerful influence upon a student's growth and development. It is possible through realistic but enthusiastic use of self to convey rehabilitation potential in a geriatric setting. To model professional behaviors through the application of educational principles is the norm. Extending beyond this to share one's own values and beliefs presents ethical complications. However, a touch of missionary zeal for geriatrics is essential.

Strategies to enhance a student's perception of the value of a geriatric setting are numerous. Demonstrating that the care of the elderly is vital, dynamic, and rewarding through personal example is important. Presenting examples of increased knowledge by observing the adaptation of elderly individuals to chronic and acute disability provides role models that a student can relate to. Observing the variable presentation of disease and symptoms in the elderly increases depth of knowledge about disease. Medication effects and side effects are often idiosyncratic. Treatment techniques vary little, but skilled observation is needed to permit maximum performance in the elderly. This skill is vital to practice. If one sees the long-term effects of both adaptive and maladaptive behaviors, one can be more effective in dealing with the elderly individual to effect change. Demonstrating the value of adaptation to reality is clearly seen in those patients who have accepted and learned to live with loss of function.

Describing and underlining the positive aspects of geriatrics treatment in interdisciplinary setting exposes students to change of attitude. The responsibility of a preceptor is to share information and guide student growth through structured experiences. A student requires close supervision with opportunity for preceptor observation and feedback. This monitoring allows basic knowledge and personal strength areas to be clarified and challenged as needed. Attitudes can be effected through modeling and education, such as those presented in ITTG presentations. Follow-up in observation of student skills allows the preceptor to support the learning process.

Providing example by the use of positive attitudes is vital, especially in a challenging geriatric situation. The preceptor models by encouraging the patient's acceptance of loss; to perceive loss as less overwhelming. This effort results in a greater response by the patient rather than the typical inactivity or dependency that often follows. Modeling problem-perceiving behaviors is perhaps more important. A positive mental attitude in which the glass is perceived as half-full, not half-empty, promotes positive motivation. The judicious use of a Pollyanna attitude is also very effective. This allows one to look at others' strengths and potentials; providing support of positive behaviors. To view long-term goals as a series of achievable smaller steps permits the achievement of overwhelming tasks.

Positive attitudes and supportive relationships can foster change, where change, technically, might be impossible. Problems are perceived as a series of accessible challenges.

The following occupational therapy case is an example of how effectively an interdisciplinary model works in a geriatric setting: Mr. T. came to our facility when he was 74 years old, after a long stay in the nursing home. His multiple diagnosis included occipital infarct resulting in blindness and severe arterial disease. His symptoms included being fixed in a fetal position, with confusion and an inability to communicate. A student named Terry, who was assigned to him, felt overwhelmed by his appearance and his inability to do anything for himself. When encouraged by her preceptor to begin a functional assessment, she was able to identify improving his position as a primary goal. Terry worked with Physical Therapy in dealing with his contractures. She was then free to address his lack of communication and confusion. These collaborative efforts continued when other team members allowed her to work on simple tasks with him.

As a result of this team effort, he was eventually able to sit in a chair and eat with a modified spoon. The result for Terry was as rewarding and professionally fulfilling as it also was for her preceptor. The positive feelings generated by this experience served to fuel her interest to continue working as part of a team in a geriatric setting.

At Coatesville VA Medical Center in the Nursing Home Care Unit, the graduate student nurse experiences the nurse practitioner role and the nurse administrator role in the area of gerontology. The latter is discussed first.

The Nurse Administrator Preceptor. The nurse administrator, as a preceptor, demonstrates a diversified role in both clinical and administrative areas. In this position, the nurse keeps abreast of the current clinical status of the patients in the unit and coordinates administrative duties to promote effective management. The graduate nursing student is able to have a shared learning experience whereby the Certified Registered Nurse Practitioner (CRNP) and the Certified Nurse Administrator work in the same unit. One can see how specialized nursing areas overlap and why effective communication mechanisms are necessary.

The student nurse is brought into Treatment Team meetings and participates as an active member. Input from the student is expected, students are not considered observers. Because the Nursing Home Care Unit is a funded site for Interdisciplinary Team Training in Geriatrics, the student also receives education in gerontology and is expected to present a project that has been studied during the assignment of CVAMC.

The preceptor for the nursing administration experience exposes the student to the need for excellent communication skills with all services. The student learns that although a work plan may be planned well in advance, it must also be flexible to accommodate unscheduled meetings, patient, family, or employee problems that emerge. If interruptions are too frequent, the administrator must correct this or work becomes nonproductive. The student sees the results of an open-door policy more effectively.

The nurse administrator also coordinates treatment team meetings. The students as members of the team learn to use communication techniques in ITTG classes such as conflict resolution. A team meeting may include the following disciplines: nursing, medicine, rehabilitative medicine, corrective therapy, occupational therapy, music therapy, dietary, and recreation. The student is able to see the effects of weak and strong leaders as group leadership is rotated. When the group includes other services, team meetings become more challenging.

The Nurse Practitioner Preceptor. Nursing recognizes the importance of keeping pace with advances in technology and the rapid changes taking place in today's health care field. These changes demand that we come together with an interdisciplinary perspective with an understanding and respect for each other's purpose and contribution.

We at CVAMC have been involved in ITTG, using multifaceted training as an interdisciplinary focus. Training involves the development of care teams of practitioners with in-depth understanding of gerontology (the study of the normal process of aging) and geriatrics (the understanding of the special needs and care of the aged). These special areas in nursing practice are becoming more critical in today's era of specialization.

Care team members use their skills to develop a finely tuned interdisciplinary team. This team effort involves understanding of self and others. Funding includes monies not only for training and developing interdisciplinary teams, but resources that encourage and support pertinent research in this area of specialty. Resources are maximized by developing new teams and practitioners.

A nurse practitioner preceptor can provide a solid foundation in the growing awareness of nursing's contribution to health care. Some functions may only be performed by one profession but there is still need for cooperative efforts. It is part of nursing's responsibility to manage acute and chronic diseases with standards for practice and expected outcomes in collaboration with other preceptors.

Furthermore, those who supervise and manage nursing's function and scope of practice must also learn about this profession and of its expanding roles on the health care field. Often those in management positions have never interacted with nurses in these newer, expanded roles. Successful interaction between management and the practitioner is crucial.

Students are generally seasoned practitioners in the field of nursing. They come from varied areas of expertise, such as acute care areas, administration, and education experiences. Yet, they arrive as students and must acclimate to a new learning environment.

In addition, they are presented with didactics in gerontology and geriatrics. With this comprehensive foundation they are then introduced to interdisciplinary team functioning. Classes and workshops are presented to help them understand the advantages of interdisciplinary team functioning. Various modalities such as videotaping, role playing, and presentations are used.

Familiarizing students with the environment and helping them to become comfortable with their newly learned assessment skills is important. Of more importance is how the preceptor performs when interacting with others, in resolving conflicts. Much of this is not taught, but learned through the process of observing and experiencing. Students have an opportunity to attend team meetings, planning sessions, and committees. They take an active role and are encouraged to participate as any other member on the team.

Following team meetings, nursing students have an opportunity to discuss issues with their preceptor that they have learned from a team experience. The classroom setting also provides opportunity to discuss and resolve problems or special concerns they experience as members of a team. Preceptors themselves are familiar with training sessions as they have taken part in the same training. They also present programs for students and other team members concerning their area of expertise.

It is easy to see that being a preceptor is a weighty responsibility, but is also a very rewarding one. To see even seasoned nursing practitioners come into our facility overwhelmed by the vast learning experience they may have undertaken, but leave confident in the knowledge base they have developed, is most satisfying.

Conclusion

In summary, the older adult patient requires the multiple skills available in today's health care field. Because of the complexity of health problems associated with the elderly, it is essential that greater opportunity for collaboration be made available to those professions who treat the older adult. The responsibilities for the preceptor can be enhanced when involving other disciplines in the preceptee's educational experiences. Under such conditions, the preceptor is able to provide a more positive role model for optimum learning to take place.

If the multiple services for the aging are seen to exist on a continuum of care, then it is essential that the interdisciplinary model of a primary health care team is emphasized. With shrinking costs, there is greater need for collaborative work in the fields of geriatrics and gerontology. No single discipline can effectively manage to provide for the total care of an aging patient. With a holistic approach to quality health care, those multiple disciplines who interact together in the area of the older adult must learn to collaborate more successfully in order to assure continuity of care. A facilitating interdisciplinary team model, such as the ITTG, assures that preceptors will be able to receive the support and resources needed to aid in the development of new practitioners entering the field of health care for the older adult.

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WEEKLY INTERDISCIPLINARY PATIENT CARE ROUNDS

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The Problem

LaGrange Memorial is a 276-bed community hospital. From 1976 to 1986, it was noted that there was a steady increase of patients over the age of 65. In addition, patients over 75 years old made up 54% of the over-65-year-old group. Since this older population presented with multiple diseases, an increasing number of elderly patients with complex discharge planning needs was identified. These complex needs demanded interdisciplinary coordination to promote timely discharge planning. Nursing faced the issue of evaluating each patient and redesigning the therapy accordingly, so that timely and efficient discharge could occur. To achieve success, individualized patient care demanded coordination and excellent communication. Time was of the essence. The process needed to begin immediately and it needed to continue throughout the patient's stay.

Establishment of Interdisciplinary Rounds

The Continuity of Care Coordinator and the Gerontology clinical Nurse Specialist collaborated on the establishment of weekly interdisciplinary patient care rounds to address discharge planning issues. The goals of rounds were to enhance quality patient care by: (1) providing a mechanism for early identification of patient problems, (2) facilitating the discharge planning process, (3) promoting interdisciplinary communication and teamwork, (4) promoting effective utilization of the professionals' time, (5) identifying needed patient care conferences, and (6) facilitating compliance with fiscal regulation. This concept was presented to Nursing Management and accepted in February 1984.

Rounds were initially established on one unit for a trial period of one month. The first members of the team included the Gerontology Clinical Nurse Specialist, Nursing Staff, Dietitians, Social Workers, Continuity of Care Coordinator, and Physical Therapist. A format was established so that Nursing would present the information with a focus on the patient's discharge planning need. All patients on the unit were discussed during rounds, which took place on the unit and lasted for approximately thirty to forty-five minutes.

After refinement of the process during the trial period, other Medical/Surgical units were added in a planned progression, one month apart. Prior to rounds implementation, unit managers and nursing staff were inserviced on the goals and format. The second unit began interdisciplinary patient care rounds with two additional team members: an Occupational Therapist and a Chaplain. Within five months, all five Medical/Surgical units had begun rounds. The DRG Physician Advisor and Pharmacist joined the interdisciplinary team during December of 1984. On the average, eleven team members consistently attend rounds: (1) Continuity of Care Coordinator, (2) Chaplain, (3) Gerontology Clinical Nurse Specialist, (4) Dietitian, (5) DRG Physician Advisor/ Utilization Review Representative, (6) Unit Staff Nurse, (7) Occupational Therapist, (8) Patient Educator, (9) Pharmacist, (10) Physical Therapist, and (11) Social Worker. Other members of the interdisciplinary team in a consultant capacity are: (1) Cancer Support Team members, (2) Enterstomal Therapist, (3) Nutritional Support Team member, (4) Patient Representative, (5) Respiratory Therapist, and (6) Speech Therapist.

Standardization

After the process had become operational on all of the units, several issues surfaced. The presentation of information lacked consistency, individual roles needed definition, goals needed clarification, and team communication needed improvement. A task force consisting of Nursing and three other disciplines was utilized to standardize the process and redefine roles and goals. A survey was generated to all team members and unit staff to elicit feedback.

Consistency of Information. The survey resulted in a standardization of information conveyed during rounds. It was agreed that either the staff nurse or the clinical coordinator would introduce the patient information. Routinely, the information would include name, room number, age, diagnosis, physician, and any other information deemed pertinent. It was further agreed that a patient care conference would be scheduled at another time for any complex issues identified.

Roles. An information booklet was developed by the interdisciplinary team members to provide the Medical and Nursing Staff with a summary of their contribution to discharge planning. The booklet included information about services provided, as well as about how those services could be initiated.

Goals. The survey, completed by the interdisciplinary team members, ranked the purpose of rounds in the following order:
(1) patient care, (2) inpatient care planning, (3) patient discharge planning,
(4) identification of educational needs of the patient,
(5) interdisciplinary plan of care, (6) compliance with fiscal regulation, and
(7) identification of patient care conferences.

Communication. A reporting form was developed to track referrals and problems identified. This reporting form was subsequently used on each unit during the weekly rounds. The Interdisciplinary Rounds Documentation Sheet included the patient name, room number, age, physician, diagnosis, identified problem, service referred to, and service referred by. Problems, categories, and services were coded to facilitate documentation. The task force designated the Gerontology Clinical Nurse Specialist and the Continuity of Care Coordinator as being responsible for recording patient problems discussed and referrals made.

Communication issues also existed regarding team referrals of identified patient problems. The task force suggested that more team input during rounds would enhance communication and the discharge planning process. For instance, each team member would be expected to discuss patient information pertinent to the services that they were providing. Social Service and Continuity of Care would be responsible to document the discharge plan on the nursing Kardex.

Results

The effectiveness of interdisciplinary rounds was evaluated for a five-month period in 1985. During that time, rounds on each unit for one week of each month were reviewed--a total of 24. Utilizing the rounds documentation form, the following areas were examined: (1) the number of patients discussed, (2) the number of patients referred, and to which service, (3) the services initiating the referrals and the number of referrals by service, and (4) classification of the patient by age, diagnosis, and problem type. Findings indicated that multiple problems were identified for many patients and that multiple services were also likely to be involved. During the sample, 658 patients were discussed, with 273 new patient problems identified. Problem identification most frequently involved patients over 75 years of age (51 percent), followed by patients 65 to 74 years of age (22 percent), and patients 45 to 64 years of age (20 percent). Only 7 percent of the problems identified involved patients under 44 years of age. In descending order of occurrence, the most prevalent patient diagnoses were orthopedic, cardiac, cerebral/vascular, neurological, and cancer related. Home-care issues were most frequently identified. These problems included, for example, an evaluation of the need for nursing care in the home, meals-on-wheels, and home physical therapy. Emotional/spiritual problems ranked next in frequency, and involved referrals to the chaplain. Problems related to extended care facilities were the third most frequently identified, and involved evaluation of the patient for placement in an extended care facility. Fourth were problems related to patient/family support. Included in this category were such issues as assisting the patient/family to adjust to the hospitalization, psychological support, and preparing for post-discharge. The team member most frequently involved in the referral was the Continuity of Care Coordinator followed by the social worker, and the chaplain.

An additional assessment was done, examining length of stay by patients 65 years and older, among selected DRG categories. Length of stay during 1985 was compared with pre-rounds length of stay during 1983. Recognizing that there are many variables affecting length of stay, the study has demonstrated a decrease in the length of stay specific diagnosis subsequent to the initiation of the interdisciplinary patient care rounds. Specifically, a decrease of three days for cerebral/vascular, neurological diseases, a decrease of over two days for cardiac diagnosis, a decrease in the length of stay of over two-and-a-half days for GI/abdominal problems was noted. Cancer was the only diagnosis where length of stay increased.

Conclusion

A consistent participation of the disciplines in daily rounds speaks for itself. Team members are committed to the process and their feedback has been positive. Patient problems are identified and interdisciplinary communication has been enhanced through the consistent opportunity to discuss patients and plan care. Effective utilization of time is enhanced by the consistent meeting and the timely identification of problems. Rounds have eliminated paperwork and communication delays for all services involved, particularly for the DRG Physician Advisor and the Utilization Reviewer.

Interdisciplinary rounds are effective in identifying new patient problems and serve to initiate needed patient referrals both inpatient and post-discharge needs. In our setting, we believe rounds have also had an impact on decreasing length of stay, increasing patient/family satisfaction, and increasing cohesiveness among the disciplines.

INTRODUCTION

GERIATRIC TEAM RESPONSIBILITY/EFFECTIVENESS

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Two important issues facing health professionals in the care of the elderly are interdisciplinary team function for providing service and the ethical and legal situations emerging in the context of that interdisciplinary service delivery. The papers presented in this panel will examine these two issues to shed light on the theoretical and practice problems encountered in geriatric team responsibility and effectiveness.

The first paper, presented by Dr. Heinemann and Ms. Tsukuda, will lay out the evidence gleaned from careful examination in implementation of the interdisciplinary team training program in the Veterans' Administration ITTG program. They will offer the challenge for more rigorous scientific evaluation of the team approach in geriatrics.

Dr. Bissoneau and Ms. Newman will present their study of a Geriatric Evaluation Unit (GEU), a recent model for interdisciplinary health care teamwork for evaluating the older patient. They will analyze the Veterans' Administration management structure of the GEU and the Interdisciplinary Team Training program (ITTG) using the theoretical perspective of the matrix organization. The fit of this management perspective to facilitate the collaborative relationships of the interdisciplinary team in geriatrics will be explored.

The third paper will explore the legal and ethical responsi-bilities of health care professionals in the care of the older patient. Dr. Kapp will present the ethical basis of responsibility in terms of the principles of patient autonomy, nonmaleficence, beneficence, and justice. Further, he will present legal issues of interprofessional cooperation in terms of the general standard of due care owed by care-givers as well as caregivers' obligation of nonabandonment.

EVALUATING THE EFFECTIVENESS OF GERIATRIC HEALTH CARE TEAMS: REEXAMINING THE ISSUES

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Improved efficiency, better management, comprehensive assessment, improved knowledge and skills, expanded roles, and positive outcomes are all assumptions underlying the interdisciplinary team approach in geriatrics. Interviews with Program Directors of the Veterans Administration's Interdisciplinary Team Training in Geriatrics (ITTG) program and team members, themselves, indicate that geriatric health care teams are effective in a variety of ways with regard to organizing and delivering care and services to elderly veterans. On in-patient units where the team approach is utilized, average length of stay has been reduced markedly. Home care teams, too, report maintenance of very dependent elderly in the community without detrimental impact on family caregivers, in part, because care planning has been expanded to include consideration not only for the patients, but also for family members serving as full-time caregivers. Innovative interventions have been developed to meet patients' and families' needs (e.g., reality orientation and reminiscence groups, support groups for caregivers and relatives of long-term care residents, bereavement and emotional counseling, social visiting volunteers, programs to improve learning ability and self-esteem among long-term care residents, and cognitive therapy for depressed elderly). Finally, team members report increased confidence in developing care plans for patients and increased respect for the contributions of other disciplines with regard to such planning. Pride in and satisfaction with work are mentioned, as well, by health professionals who serve as team members.

Geriatric Evaluation Units (GEUs) and Geriatric Consultation Services, utilizing a team model for delivering care and services, have been evaluated in controlled studies; findings include decreased length of hospital stay, reduced and more appropriate use of medications, more comprehensive care, identification of new problems and diagnoses among patients, and improved discharge planning (Rubenstein, Josephson, Wieland, et al., 1984; Rubenstein, Wieland, English, et al., 1984; Allen, Becker, McVey, et al., 1986). Elsewhere in the Veterans Administration (VA) system, other geriatric or geriatric-related clinical programs rely heavily on the team approach: hospital-based home care; respite care; adult day health care; nursing home care; and hospice care. Obviously, in this context, the team approach in geriatrics is perceived positively. From the specific ITTG program sites through various levels of the VA's health care system, it is assumed that teamwork is a necessary ingredient in planning and implementing geriatric care.

Advocates of the team approach in geriatrics exist outside, as well as within, the VA system. T. Franklin Williams, M.D., Director of the National Institutes on Aging, is one such example. He has stated that . . .

> . . . It is clearly impossible for any one professional to address adequately the full range of problems olderpatients often present,

> usually at times of crisis—medical or social. The rapid appearance of multidisci-plinary geriatric assessment or consultative clinics and services in many settings, staffed with physicians, nurses, and social workers, all of whom are directly involved with the work-up and planning for the care of the patient and the family, together with the regular use of other consultants, all speak to the growing recognition of a team approach. To be a "complete geriatrician" means to be a team geriatrician (Williams, 1986, p. 348).

While observations of geriatric teams, self-reports of team members, and evaluations of initiatives or specialized units in geriatrics, where teamwork is one component, support the feasibility of the team approach, a review of current literature shows that rigorous, scientific evaluations of the impact of the geriatric health care team, itself, are few and often inconclusive. Halstead's statement of ten years ago, unfortunately, is still applicable today, "An avalanche of articles and reports has been published which almost unanimously endorses the proposition that team care is desirable, relevant, and effective in many areas of health delivery. Yet, the evidence to support these claims is exceedingly slim" (Halstead, 1976, pp. 509-510).

An alternative point of view, that health care teams serving geriatric units may be more myth than reality (Evers, 1981) and that clinical health care teams are "replete with problems of authority, coordination, leadership, efficiency, and legal responsibility" (Dienst and Byl, 1981, p. 212), is suggested in the literature. Moreover, Rae-Grant and Marcuse (1968) have stated that the shared responsibility and anonymity afforded by teamwork results in less responsibility taken by and less clinical effectiveness forthcoming from each individual team member; that where teamwork becomes an end in itself, commitment to the team infringes on commitment to patients; and that education for teamwork can compromise a health professional's confidence, independence, and ability to function on his or her own.

Adopting the style used by Spitzer and Roberts (1980), we raise a number of questions related to why these inconsistent viewpoints exist and why there is so little systematic research and evaluation of the team approach in geriatrics. We address the challenges of such research efforts and encourage research focusing on inputs and process as well as outcomes. We believe that a premature emphasis on outcomes or impact of the team approach in geriatrics could result in its unnecessary demise.

Challenges in Researching Geriatric Health Care Teams

Researching and evaluating health care teams in geriatrics are not easy tasks; the complexities and difficulties associated with them, in part, explain why there are so few reported studies in the literature. The challenges associated with systematic evaluation of teamwork in geriatrics can be identified in four broad areas: the geriatric population, itself; theoretical assumptions regarding our expectations of teams; definition of concepts and measurement of variables; and research design.

The Geriatric Population. The heterogenous nature of the elderly population and the numerous and varied health problems and chronic conditions afflicting the geriatric subgroup of this population make generalizing of research findings from any one study difficult. Should health care teams be concerned with the problems of only the frail, sick elderly, or should they expand their mission to include prevention among the well elderly? Should teams be "generalists" and serve geriatric patients with a wide variety of health problems, or should they focus on patients with a specific disease entity (e.g., arthritis teams or Alzheimer's teams)? Should teams be strictly geropsychiatric or general medical, or can one team meet both the mental and physical health needs of a geriatric patient population? These questions lend themselves to future research efforts; their answers will permit more realistic comparisons between the team approach and more traditional approaches to care in geriatrics.

Theoretical Assumptions. Too often we assume that the stages of group development from the social psychology of small groups literature are directly applicable in our attempts to understand and evaluate geriatric health care teams. According to this framework, groups (or teams in our case) move through four stages of maturation: (a) testing and dependency (forming); (b) conflict (storming); (c) cohesion and consensus (norming); and (d) functional role relatedness (performing) (Tuckman, 1965; Tuckman and Jensen, 1977). In evaluating team process and functioning, should we expect teams to reach or maintain themselves in the fourth or performing stage? Is this a realistic expectation given the high turnover of staff among health professionals, the proportion of rotating, temporary team members on health care teams in geriatrics (e.g., student trainees in nursing, social work, psychology, medicine, and the health-related professions), and the barriers to interdisciplinary collaboration imposed on in-patient teams by the larger organizational context in which they are based? It may be that the natural evolution of an in-patient team is toward increased discipline-specific identification rather than interdisciplinary performance as suggested by this theoretical framework. While this framework has been useful in guiding observational research on health care teams (Farrell, Heinemann, and Schmitt, 1986), too strict an adherence to it could result in our ignoring other new research approaches and explanations of team dynamics.

Definition and Measurement. Some of the definition and measurement problems in researching health care teams in geriatrics are shared with other health care and team researchers; others are specific to teamwork in geriatrics. Four concepts present challenges in this area—health, quality of care, team, and team functioning. First, what is health, and how does one measure it? The definition of this concept is sometimes so broad that measuring it becomes almost impossible; this is especially problematic when mental health and social adjustment are important factors as they are in geriatrics. Should the researcher attempt one global measurement, or should different facets of health be measured independently? With regard to the geriatric patient, should one count the number of chronic conditions, attempt to measure the severity of illness, or look at changes in functional status (physical, mental, and social) over time?

Quality of care is the second concept that has created definition and measurement problems for health care researchers. Is quality of care something more than satisfaction with care on the part of the patient and/or the health professionals? How does one measure the impact of care on patient's self-esteem, sense of identity, and will to live? How is quality of care related to positive health care outcomes among geriatric patients?

Thirdly, the concepts "team" and "teamwork" have no conceptual or operational definitions that are employed consistently in the literature. Reference is made to a variety of different types of teams--intradisciplinary, multidisciplinary, interdisciplinary, and transdisciplinary. In some instances, the terms, multi- and interdisciplinary, are used interchangeably; in others, clear distinction is made between them such that the optimal level of teamwork is interdisciplinary in nature. Interdisciplinary teamwork involves collaboration and interdependence among health professionals. Thorton, Dodson, et al. (1980) also note that in interdisciplinary teams, roles, territory, and power dispositions are less clear and less traditional than they are in other approaches to care. Little, however, has been done with regard to measuring this concept. Size of the team and the context within which it functions also vary widely. Is the two-member team of physician and nurse practitioner or the three-member team of nurse, social worker, and physician comparable to a twelve- to fifteen-member team which includes as many as nine different disciplines? Are home care teams, general hospital teams, service delivery teams, and long-term care teams comparable?

Finally, we have not answered adequately the question, how does one measure team functioning? When do health professionals who work together become a team? Do they require formal educational preparation before they truly function as a team, or must they show improved functioning over time as a result of formal team training? On which aspects of team functioning should one focus? What measurement tools are available or should be developed to measure the various facets of team functioning? How does one weigh the task-oriented characteristics of a team with its process characteristics (e.g., implementing the patient care plans and resolving patients' problems versus developing cohesion and collegiality among members)?

Research Design. Challenges in the area of research design include confounding variables, the introduction of bias, the need for multiple methods of data collection given the complexity of team research and evaluation, the appropriateness of specific research designs, and pressures related to cost containment and cost effectiveness in health care.

With regard to the problem of confounding variables, Thomas and Royer (1977) have noted that many factors influence health status, and teasing out the confounding variables from "team intervention or impact" is not easily accomplished. This problem is related to evaluations in the applied setting where evaluators cannot control all of the variables (e.g., system changes, staff turnover, shifting patient/client populations). Also problematic is determining what aspect or which aspects of the team effort is/are responsible for a given positive health outcome.

Bias is also a consideration in designing research on teams. How does one minimize bias introduced by the evaluation process itself? And, more specifically, should the evaluator be part of the team? If so, will findings be less objective, or will the evaluator gain meaningful insights about team process as a team member? Which is more important with regard to research findings--objectivity or insights? Additional sources of bias include bias of team members, who want the team approach to be effective and want to be assured that their efforts have positive outcomes, and bias introduced from subtle and not-so-subtle pressures from administrators and decision-makers, who do not want to lose innovative programs and the financial support that often accompanies them.

Confounding variables and bias can be minimized, in part, by utilizing multiple methods of data collection in research and evaluation on teams. The perceptions of individual team members is not adequate by itself; one needs to look, as well, at interactions between and among team members since the group or team has a life of its own apart from the individuals involved (Thorton, Dodson, et al., 1980). Making use of several methods of data collection, one can look for consistency in findings from observational data, interviews with team members and patients, and health outcome assessments. When these findings support one another, one can be more confident that the team approach has had an impact.

Two specific research designs pose challenges for research on teams. In retrospective designs, clinical data are used for evaluation purposes. There may be a lack of needed data; the information available may not be relevant to the evaluation; or information from charts and records may be difficult to quantify. Randomization of patients, too, has been questioned by those supporting the goal attainment model of evaluation. When one is interested in evaluating goal achievement for individual patients rather than impact of a specific treatment, randomization is not the design of choice.

In general, evaluation researchers have attached less significance and prestige to input and process studies in comparison to outcome or impact studies. Additional pressure for outcome studies comes from funding agencies and policy-makers due to the high costs of health care and the commitment at the federal level of government to reduce it. Evaluators of teamwork are being urged to focus research efforts on positive health outcomes and the cost-effectiveness/cost-benefit of the team approach. Two questions become relevant in this regard: Are we ready to focus on outcome studies, and should we undertake outcome studies in isolation from input and process measures? To concentrate exclusively on outcome/impact, especially if done so prematurely, may result in negative research findings that have little, if any, relationship to the true impact of the team approach in geriatrics or elsewhere.

Inputs, Process, and Outcomes: A Closer Look

In systematic evaluation, input measures are resources to the system (e.g., staff, facilities, etc.), process measures refer to how the system functions, and outcome measures are system outputs or results—the extent to which goals have been achieved (Eustis, Greenberg, and Patten, 1984). In this section of the paper, we take a closer look at possible research questions related to the team approach in geriatrics in each of these three areas and emphasize the need for research in all of them. Until we have a better understanding of the necessary inputs to effective teamwork and the many and varied components of team functioning, we are not prepared to undertake outcome studies. Those outcome studies that are being undertaken should take into account input and process measures as well; it makes little sense to evaluate the impact of teamwork if we do not know whether the health professionals are working as a team and at what level the team is functioning.

Input Measures. The health care team has been defined as a feedback system made up of health professionals from a number of different disciplines who serve as team members, a patient or client population that receives care and/or services, and a context in which the team is based and operates (Ducanis and Golin, 1979). With regard to team members, questions related to input measures might include: Are there specific criteria for selecting team members? What are they, and how were they determined? Who makes the final selection, and do other team members have input into the selection process? What makes a good "team player?" Can he or she be recruited, or is it more a matter of team training and flexible adaptation? Are health professionals from some disciplines better prepared for and/or more receptive to teamwork than others? Within any one profession, are some subspecialists more likely than others to work well within the team model?

Questions about the availability of selection criteria, their appropriateness, and their use can be applied to the patient or client population as well. Additionally, are the specific disciplines represented on the health care team appropriate for meeting the needs of the population being served? And, as mentioned earlier in this paper, should the team approach be targeted to very specific subgroups of patients who would benefit most from it, and how do we begin to identify these subgroups?

Inputs related to context can be identified at the macro and micro levels. At the macro level, one might want to consider how the larger organizational structure influences team development and functioning. That is, is interdisciplinary teamwork more likely to occur when a team is operating within the larger organizational structure or on its fringes? How much and what kind of administrative and supervisory support is necessary for maximizing team development and functioning, and what form should it take? Does the team approach work more effectively at the level of clinical health care teams when management employs the same model as a management style? At a more micro level, how does the geographic proximity of team members' offices influence their ability to communicate and interact with one another? Does the team have a conference room or any shared space of its own for formal meetings and informal interactions? Is this space designed and organized to promote interdisciplinary efforts, and is it set apart from major traffic patterns and disrupting noises?

Process Measures. The team functions to achieve two goals--task-oriented goals related to the needs of the patient or client population and process goals related to relationships among team members, themselves. Process, then, refers to the dynamics through which these goals are achieved. This area is especially ripe for research because process measures indicate how well a team is functioning. Researchable questions center around the team's structure and organization and the interaction patterns among team members. Is there a common language among team members, or does each individual use his or her own discipline-specific jargon? Does the team have a clear, agreed-upon mission and written and/or observable procedures for carrying it out (e.g., for conducting meetings, developing patient care plans, orienting new members, etc.)? A common language and formalized procedures are indicators that the team has developed, in part, its own culture with norms and rules for operating.

With regard to team meetings, how often does the team meet, and how long does each meeting last? How are team members notified of a meeting and the purpose of the meeting? Is the notification early enough for each individual to come to the meeting prepared? Is there an agenda for the meeting, and is it followed? Do team members come to meetings on time and participate in the discussions? Is power and decision making centered in one or two team members or shared? Is more than one style of leadership evident, and under what circumstances are various styles of leadership used successfully? Do team members understand one another's skills and abilities and make use of them appropriately? Do they communicate well with one another? Is the atmosphere in the meeting relaxed and open or tense and hostile? Do members seek out one another's opinions and support one another during meetings? Is there a sense of solidarity among team members, and how is it expressed? And finally, what proportion of interactions among team members take place outside of the team meeting?

The well-functioning team should be monitoring and evaluating its progress toward goal achievement. Does the team set measurable goals for resolution of patients' problems and for its own growth? Are segments of team meetings set aside for follow-up review of patients' progress and/or for self-assessment? That is, does the team truly function as a feedback system? Lastly, has the team achieved a balance between attempting to meet task-oriented goals and process goals?

Outcome Measures. Discerning outcomes or impact of the team approach in geriatrics is one of our greatest challenges. Outcomes often are difficult to measure, and when the measurement problem is overcome, it is difficult to link outcomes to team care directly and causally. As mentioned earlier in this paper, the emphasis at the present time is to evaluate the impact of health care teams in geriatrics by attending to positive health outcomes among patients and cost effectiveness/cost benefit of team care, itself. Other outcomes, too, may be important and should not be ignored: the impact of the team approach on health professionals who serve as team members; attitudes of the patients toward team care; the indirect impact of this approach on patients in terms of new and innovative programs and interventions developed as a result of broad knowledge base and better utilization of time; and the impact of the approach on the larger organization.

Determining what is a positive health outcome among geriatric patients is a complex task. Should one always look for improvements in health status and functional ability, or can maintenance or a slowed decline in these areas be considered a positive outcome in some cases as well? Is "death with dignity" a positive outcome, and, if so, how does one measure it? In our efforts to be scientific, have we placed too much emphasis on quantifying information and overlooked some of the benefits of a qualitative approach? If patients' health outcomes show a pattern of decline over time, how does one determine whether this is related to a decline in a team's functioning or improved functioning and the ability of a team to serve frailer, sicker patients? Even when the researcher does demonstrate positive health outcomes, they often represent such small increments of change that policy-makers who are not well-versed in geriatrics and gerontology may not understand their importance or significance. Cost data, too, present many complexities to the researcher. Accuracy of such data is sometimes questionable, and management of these data is frequently a cumbersome activity. Moreover, linking health care costs to actual treatment/care interventions and delivery of services and employing appropriate analysis techniques are major undertakings for even the most skilled researcher.

In terms of identifying other meaningful outcomes, one might ask: Are morale and job satisfaction higher among team members in comparison to other health professionals? Is staff turnover affected by the team approach? Are team members more innovative with regard to patient care and management than other health professionals? In terms of patients' attitudes, what are the patients' perceptions of team care, and do they perceive it more positively than more traditional modes of care? The influence of the team approach on the larger organization has been underplayed to this point. As health professionals move off of health care teams, do they take with them new knowledge and skills useful in other settings? Is the larger organization different because the team approach has bee implemented at the clinical level? Furthermore, do students who have participated on health care teams, take new skills back to the classroom or other clinical affiliation sites, and do they seek employment in settings where the team approach has been implemented?

Conclusion

In this paper, we have attempted to explain why inconsistent viewpoints about the team approach continue to exist and why there is a paucity of systematic research and evaluation studies about the impact of this approach in geriatrics. We have addressed the challenges related to conducting research in this area and have urged researchers to avoid the pressures from the current political environment to focus energies solely on outcome and cost studies. Just as one individual health professional cannot meet all of the demands of health care in geriatrics, no one research/evaluation strategy is appropriate to answer the complex questions related to team effectiveness. We have suggested that more attention be paid to inputs and process and that outcomes be linked to these other measures. We do not believe it is appropriate to address the issues of cost effectiveness/cost benefit until we have a better understanding of what a team is and what constitutes an effectively functioning team. We hope that some of the issues raised in this paper will stimulate new research efforts with regard to the team approach in geriatrics.

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A GERIATRICS MATRIX ORGANIZATION

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With the current interest in prospective payment systems (PPS), health care organizations are looking closely at product line management and matrix management structures in order to improve their financial positions. Of course, geriatrics can be viewed as a product (service) line and as a focus for a matrix organization.

Generally recognized as one of the most complex management arrangements, matrix management is, in fact, a program designed to simplify and focus on the needs of patients in health care organizations. The purpose of this paper is to analyze one of the country's most complex structures, the Geriatric Evaluation Unit (GEU) at the 366-bed Veterans Administration Medical Center in Tucson, Arizona.

Geriatric Evaluation Unit

The GEU is a 14-bed unit in the Medical Service for specialized inpatient assessment and comprehensive care of the older veteran with multiple and interactive problems in physical, psychosocial, and self-care functioning. Such problems impact upon medical care delivery and outcome. Patients admitted to the GEU generally require the services of two or more allied health professions represented on the GEU team, in addition to medical and nursing care. These patients have existing support systems that will continue after discharge. It is anticipated that discharge to a noninstitutional setting is a reasonable expectation for each patient admitted. The GEU team defines itself as a collective of resources which maximize the patient's likelihood of returning home. In addition to medicine and nursing, team members include professionals in social work, dietetics, clinical pharmacy, audiology, occupational therapy, speech-language pathology, clinical psychology, and psychiatry.

These team members have been assigned geriatric inpatient care responsibilities as part of their total clinical care responsibilities by their respective service chief. Most of these staff team members are also responsible for the clinical supervision of trainees rotating through geriatrics in the associated Interdisciplinary Team Training in Geriatrics (ITTG) program. The ITTG program provides additional trainee stipends to existing clinical training programs in order to establish geriatrics rotations. Core team members in social work, clinical pharmacy, dietetics, nursing, and medicine also staff the twice-weekly geriatrics clinic.

Some team members have been part of this team for as long as four years, while others have joined more recently. Newer team members have become involved primarily to supervise their students on geriatrics rotations as a result of the ITTG program. For some team members, geriatrics was assigned to them by their supervisors; for others, team membership was a matter of individual choice and special interest. Most team members value their team involvement and, if given the choice now, would choose membership in this health care team.

Resources for maintaining this team include an annual budget for sponsoring in-house continuing education workshops in gerontology and team development/maintenance, and limited travel funds to send team members to appropriate professional conferences and meetings.

In a recent survey of team member ratings of team functioning, the following issues were identified as important areas to focus on in future team-building inservices:

1. Dealing with team versus service role conflicts: a team member's peers and supervisors may see geriatrics and teamwork as less important and less demanding than the team member does.

2. Team meetings versus teamwork: team members identify a need to increase their team functioning in geriatrics outside the team meeting setting. This relates to issues of follow-through on team plans developed in team meetings, and to formulation of more interdisciplinary interactions around patient care outside team meetings.

Rationale for the Interdisciplinary Team

A team approach to health care delivery evolves from the recognition that a particular patient population has multidimensional health care needs requiring continuing involvement of professionals from various health care disciplines. Patient needs may include psychosocial, nutritional, environmental, rehabilitative, and other aspects of medical problems which impact on the outcome of medical care. Health care professionals from diverse fields of expertise find that they must interact regularly in the care of the individual patient. A teamwork approach may be the outcome of both the complexity of tasks in patient care and the need to reduce redundance in carrying out those tasks. Team care approaches have a long history of application in community mental health, family health care, chronic renal failure, spinal cord injury rehabilitation, and hospice care. These patient populations, like geriatric populations, are characterized by multiple, chronic, and interdependent problems and long-term continuing care needs. The philosophical basis of interdisciplinary team approaches to patient care across these populations includes the following components:

1. Care of the "whole patient" rather than specific, isolated disease entities.
2. Recognition that no single health profession includes all of the necessary expertise for total patient care.
3. Recognition of the patient, his/her family, and the health care team as interacting and dynamic components of a larger health care system.

An interdisciplinary team provides coordinated and comprehensive patient care through the continuous involvement of diverse professionals at various stages of the care process including problem identification, treatment planning and implementation, and progress evaluation. By definition, an interdisciplinary team is more than a group of health professionals each independently treating an isolated aspect of illness. Interdisciplinary team members share common, well-defined team goals, define their working relationships as interdependent, and share responsibility for leadership and facilitation of team tasks. Since the primary vehicle for health care delivery is the interdisciplinary team as a unit rather than as individual team members, the team values and regularly participates in improving and maintaining team functioning. Critical team maintenance tasks include role negotiation, clarification of decision-making and plan implementation responsibilities, and periodic evaluation of team effectiveness, efficiency, and satisfaction. Interdisciplinary team members as a unit maintain a team identity as well as individual professional identities. While other groups of professionals providing care for an individual patient may depend on progress notes and unstructured, informal face-to-face communication, the regularly scheduled team meeting is the primary vehicle of care planning and evaluation for the Geriatrics Interdisciplinary Treatment Team.

The interdisciplinary team functions as the geriatrician's "geroscope," the instrument and specialized technology of comprehensive assessment, problem solving, and progress evaluation. Team members are individually and jointly responsible for patient assessment and care. In the Geriatric Assessment Program at this medical center, the interdisciplinary team meets weekly in a patient conference where assessments are shared, problem-solving plans are generated, and responsibilities for plan implementation and follow-up are defined in a case management approach to care delivery. Each team member may assume task-oriented leadership as appropriate for the particular problem under discussion. This flexibility in leadership among team members is counterbalanced by the physician's ultimate responsibility for medical care and total care management. As the role model for the ITTG trainees, this team also meets regularly for team maintenance problem solving focused on identifying areas of team interaction and collaboration for improvement.

Interdisciplinary Team Training in Geriatrics

ITTG is an educational model unique to the VA system which provides special training for medical, nursing, and allied health profession trainees. Currently, the geriatrics interdisciplinary team includes health professionals in clinical pharmacy, dietetics, social work, audiology, speech-language pathology, and clinical psychology in addition to geriatric internal medicine and nursing. During the ITTG rotation, the geriatrics interdisciplinary team serves as a role model for coordinated, comprehensive patient care and interprofessional collaboration. One focus of the ITTG rotation is to provide health profession trainees with the knowledge and skills within their own disciplines which will enable them to contribute to the optimal care of the elderly patient. This process of learning fosters positive and realistic attitudes toward treatment goal setting for the older person.

The second focus of ITTG training is the development of interprofessional communication and leadership skills for collaborative teamwork. The ITTG students will gain experience in working as part of the interdisciplinary health care team providing continuity of care and case management across a variety of treatment settings. Also, the opportunity to work with students from other disciplines in applying teamwork skills is important. ITTG trainees develop an appreciation for the roles, methods, and skills of each other discipline in the treatment team as they learn their own professional roles in geriatric patient care.

During the ITTG rotation, students acquire an understanding of the complex interactions of psychosocial, physical, and environmental aspects of medical problems, along with the impact of these multiple dimensions of health on the outcome of medical care. At the conclusion of the ITTG rotation, students have acquired a geriatric-gerontologic knowledge base, the clinical geriatrics skills of their own discipline and a knowledge of VA and community resources available to maintain the health and independence of the older veteran. In addition, each ITTG trainee is prepared with the teamwork skills necessary for coordinated and collaborative care delivery. Teamwork skills developed in ITTG training are applicable in any health care setting providing continuing care management for chronic, multidimensional health care needs. The ITTG program is ultimately designed to prepare trainees to become effective members of an established health care team or to contribute to the development of a new interprofessional team in other settings.

Integration of Geriatrics into Clinical Training of Health Professionals

The segment of the American population over age 65 has increased at a rate of more than twice that of the general population since 1960. These demographic trends are expected to continue over the next 50 years. As a result, health professionals currently in training may find that by mid-career, up to 75 percent of their patients will be over age 65. Few health profession education programs integrate geriatric-gerontologic content into their curricula. Though training programs are increasingly responsive to this need, geriatric-gerontologic curriculum content still tends to be both segregated and elective. Surveys of health professionals in most disciplines have repeatedly shown strong preferences among practitioners and students alike for work with younger populations. In order to recruit and prepare interested and motivated health care and social services professionals for the care of the growing elderly population in general, and the aging veteran population in particular, the Veterans Administration has implemented several clinical, educational, and research programs. ITTG is one of these programs which integrates geriatrics into the student's clinical training.

Development of Interprofessional Skills for Collaborative Teamwork

Teamwork in health care delivery is not a new concept. In the 1920s, psychiatry began to recognize that increased specialization in medicine and health care brought increased potential for fragmentation of care delivery. Teamwork was seen as an approach to coordination of care delivery. Since the first psychiatrist-psychologist-social work clinical teams of the 1920s, the team approach has become characteristic of care delivery in a variety of health care settings including geriatrics. The interdisciplinary team is defined as "a functioning unit, composed of individuals with varied and specialized training, who coordinate their activities to provide health services to a client or group of clients." The interdisciplinary health care team is more than a group of individuals who call themselves a "team." Each health care team member has a defined role with specific responsibilities. The team as a unit has rules of conduct (norms), an identifiable pattern of leadership, and a system of communication. The team is task oriented with common goals shared among members, each of whom must recognize that no individual team member can accomplish the task or solve the problem alone. Each team member has unique expertise, skills, and methods which must be communicated to and recognized by other team members in order to facilitate integration of services for multidimensional patient needs. In addition, some areas of functioning in the problem-oriented care delivery process may be shared by two or more professions. Team members must recognize these areas of overlap across professions in order to reduce duplication of efforts and minimize "turf" conflicts about "whose job it is." For the interdisciplinary health care team, the overall goal is optimal patient care.

Team development may be conceptualized as a process in which the group of health professionals moves from independent, autonomous action toward a collaborative, interdependent interaction in achieving clearly defined, shared goals. "Collaboration" in this context refers to a process of shared assessment, planning, and action with joint responsibility of team members for patient care outcome. This process requires active, ongoing communication regarding issues of team priorities for patient care, role definitions and expectations, leadership and responsibility, decision making, and conflict identification and resolution. Yet formal training in interprofessional communication skills, leadership skills and team development, management, and maintenance is rarely provided in the preparation of health care professionals. Task-oriented team efficiency, effectiveness, and work satisfaction depend upon these process issues which fall into the domain of team management and maintenance behaviors.

Prior to the institution of DRGs in the private sector, approximately 80 percent of this medical center's beds were occupied on an average daily basis. An increase in this average daily census necessitates alternative approaches to care, particularly for the elderly veteran with chronic, multiple problems and continuing care needs. One goal of clinical training programs such as ITTG is responsiveness to increasing health manpower needs for professionals prepared with the knowledge base and clinical skills necessary and appropriate in the care of aging veteran and nonveteran populations.

Objectives of optimal geriatric patient care include improved coordination of care management; identification of associated physical, psychosocial, nutritional, pharmacologic, and sensory-perceptual disabilities; identification and mobilization of patient strengths and supports; and reduced rates of unnecessary readmission to acute care or nursing home placement. A focus on optimal geriatric patient care in the VA clinical training of health professionals will also include sensitization to the special health care needs and health service utilization patterns of the older female veteran.

The Matrix Connection

The GEU and ITTG overlay on the existing Tucson VA Medical Center organization structure reflects many of the strengths usually associated with matrix management. These are:

1. Flexibility. As the matrix organization, the specialized geriatric operation is able to focus its full attention on the needs of its elderly patients. Too often the health institution's resources are

diffused among the demanding units without adequate attention paid to particular service needs.

2. Decentralization. Administrative decisions as well as patient care decisions are made by health professionals who are in close proximity to geriatric patients. A characteristic of both decentralization and matrix organizations is that decision making is pushed to lower hierarchical levels. These are the people who know most about geriatrics and their patients. In turn, action is quicker and greater creativity is likely.

3. Coordination and communication. Cooperation and flow of information are enhanced. Working more closely with one another, team members are encouraged to cooperate. Thus, many traditional departmental and professional barriers can be broken down. The matrix emphasis is on care, not position.

While matrix management is not a panacea for all the problems that health organizations face, it offers an opportunity for patient care providers to gain greater control over their environment and to influence patient care in a positive way. However, problems with matrix management persist. It is considered more costly than the functional organization, although much more research is needed. One recently published four-year study of a similar geriatrics program in another VA medical facility has addressed these cost-efficiency issues. This study showed that the initial cost of interdisciplinary team assessment and care in a GEU is increased through the application of more services and professional resources than would routinely be available in a more traditional general medical acute care setting. However, examination of long-term cost outcomes shows that after one year, the increased initial costs of a GEU model are eliminated through decreased acute care readmission rates, emergency room use, and nursing home placement. In addition, patient mortality is significantly reduced through the interdisciplinary GEU model of care, and functional ability of patients is significantly increased.

Often matrix managers must report to two bosses, a dreaded situation for many administrators who state that each individual must have only one boss. Worst of all, though, is the possibility that managers associate the matrix structure with loss of authority, prestige, and power. However, many members of a health care team matrix structure stand to gain professional power, authority or status as a function of team membership. Ducanis and Golin note the impact of increased vertical differentiation of professions and subspecialties in the erosion or diffusion of the physician's traditional ultimate authority in the hierarchical structure of interprofessional relationships. As newer professions move through the process of professionalization toward defining a domain of knowledge and specialty areas, developing an ethical code and standards of practice, and controlling admission into and training within the profession, the assumption of a hierarchical ordering of professions in which higher-level professions possess all the knowledge and skills of lower-level professions is challenged.

The increasing complexity of patient care needs and technology may create an imperative for interdisciplinary teamwork and interprofessional interdependence. Although this process may function to diffuse the authority and power of higher-level professions in vertical structures, it is this same process of team development which may contribute to the status and power of professions lower in traditional hierarchical structures. Team members working together must recognize and appreciate the theoretical knowledge base and practical skills of each other profession, and must be prepared to deal effectively with areas of overlap or gap between professions. For newer professions or those typically located lower in the hierarchical structures of traditional care models, gains in power, status, and authority as a function of team membership come at the cost of exchanging autonomy for interdependence. To the extent that higher- level professions see diffusion of authority as a cost of teamwork which outweighs any benefits of a matrix structure, and lower-level professions view the exchange of autonomy for interdependence in the quest for professionalization and accompanying power and status as too great a cost, matrix supporters will have a difficult future in the health care setting.

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INTERPROFESSIONAL RELATIONSHIPS IN GERIATRICS: ETHICAL AND LEGAL CONSIDERATIONS

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The older individual living in a complex modern society may face a bewildering array of life problems--physical, mental, psychological, social, economic, legal, and spiritual. Many of these problems call for the involvement and assistance of helping professionals to resolve them. While the resolution of some of these challenges may fall within the domain of a single category of professional, many of the sorts of vicissitudes confronting older persons require some degree of interprofessional, multidisciplinary blending of knowledge, skills, and efforts.

The concept of interprofessional cooperation as employed in this paper is a very broad one. The vital need for active collaboration between physicians and nurses has long been recognized, if not yet successfully acted on. Certainly, physicians must be prepared to work and share with social workers, physical and occupational therapists, dentists, podiatrists, and other typical members of the geriatric health care team. Where physician members of different medical specialties are involved--through the process of consultation or referral--in the common care of an older patient, thorough communication and coordination is important; this involves intraprofessional as well as interprofessional cooperation. It has also been suggested that geriatricians should relate closely to basic scientists, clinical epidemiologists, health care system researchers, and social scientists in order to help generate new knowledge and approaches regarding geriatric challenges. Finally, there may even be situations in which the physician needs to work in concert with the patient's attorney on issues with both medical and legal overtones (for example, a patient's claim for disability benefits or an avoidable imposition of guardianship).

There are strong legal and ethical bases for requiring effective interprofessional, multidisciplinary cooperation in geriatric medicine. This proposition has received thus far a fair amount of professional lip service, but precious little serious, explicit analysis. Perhaps the idea is so clearly and universally accepted that it neither requires nor deserves any further time and attention. However, at the risk of prolonging the obvious, there may be some value in expressly stating and discussing some of these legal and ethical bases and their practice implications, if for no other reason than simply that the ideal they underlie still is a long way from achievement.

Ethical Bases

The physician's duty to foster, take advantage of, and contribute to interprofessional cooperation on behalf of older patients may be examined in terms of four of the fundamental principles in biomedical ethics: autonomy, beneficence, nonmaleficence, and justice.

First, autonomy is the concept of self-determination and freedom, the idea that each person, to the maximum extent possible, should be permitted to make and act upon major life decisions on the basis of personal values and preferences. Enhancing patient autonomy, enabling and empowering patients to "do their thing" in terms of important life choices, should be a principle that physicians attempt to honor as they provide care, and can be promoted by interdisciplinary collaboration. Such collaboration can best support the elder's entitlement to knowledge about health conditions and decision-making rights. The physician who commands superior medical technology, the social worker who can help the patient deal with the interaction of the technology and the environment, the nurse who can educate the patient to what it means to care for oneself using the technology, the family member who knows the elder's life history, the pharmacist who may be a specialist in the hazards of the technology, and the nutritionist who can provide education about maintaining health in the face of the effect of the technology all have special knowledge to contribute to the patient's understanding of his or her situation. Additionally, this collection of professionals possesses multiple routes of access for advocacy on behalf of the older patient's ability to exercise personal autonomy.

Second, the ethical precept of beneficence is based on our inclination to help others, to do "good" for others. It is the notion that a person's perceived "needs" should be fulfilled. Beneficence focuses on serving an individual's "best interests." This probably is the ethical principle that most strongly motivates those who gravitate to the health and human service professions for their life's work.

In many situations, the outcome of health care might be noticeably improved, and thus the welfare of the patient promoted, by interprofessional efforts. Put simply, in those situations where interprofessional efforts can best help the patient, such efforts are morally appropriate, if not obligatory. This may be especially true in the geriatric sphere, where we particularly need to move away from the prevailing emphasis of health care on acute rather than chronic care, total recovery after crisis, and life at any cost and in any form rather than death. For the aging, this orientation needs to be modified in favor of goals of continuous treatment of long-term illness, restoration after acute episodes to functioning that represents what is possible, with a view of death with dignity and free of pain as a morally acceptable outcome. We need to concentrate more on maximizing identified adaptive capacities and providing to the elderly patient comprehensive management, based on a more socially centered model of care. Promoting personal emotional growth and interaction may be more important for the older person than strictly clinical results. This objective is one that interprofessional cooperation should be well equipped to achieve.

Thus, under the beneficence principle, the main beneficiary of the team approach is, and should be, the patient. This has led some commentators to object to use of the term "health care team" in this context, on the grounds that "team" rhetoric connotes members who join together for the purpose of team victory against a foe. This is a dangerous image, it is argued, because in health care it is the patient, not the health care professionals, who is foremost and whose interests ("victory") is primary. Although this objection may be overblown, to attempt to avoid it, this paper generally uses the term "interprofessional cooperation" rather than "health care team" so there is no question of the primacy of the patient's well-being.

A third basic ethical principle is nonmaleficence. This is the concept that, even in those situations where we cannot help a particular individual, at least we should not make that person any worse. There are circumstances in which the inherent limitations of one profession and the failure to take proper advantage of available interdisciplinary skills and expertise may actually endanger an older patient. At a minimum, we must make sure that professional pride (however innocent or well intentioned in origin) does not expose the patient to unnecessary, preventable jeopardy of making a problem worse.

Another ethical principle worthy of mention here is that of justice. Although this concept is complex, it may basically be stated as the ideal--rarely realized--of a fair distribution of society's resources and benefits, where each person receives that portion that he or she "deserves." To the extent that interprofessional cooperation in the practice of geriatric medicine enhances the quality of patient care, and improves the efficiency and effectiveness of that care, it serves the principle of justice; the individual patient receives the high-quality care that he or she "deserves," while the efficient, effective use of health resources makes more of those resources available to address the legitimate needs of others.

Legal Bases

For a physician who has undertaken the care of an older patient, positively interacting and cooperating with all other relevant health or human service (taken in its most expressive meaning) professionals is not only clinically and ethically desirable, but, at least arguably, should be a legally enforceable duty as well. There are several theoretical underpinnings for a legal duty of interprofessional cooperation.

First, this duty should be considered encompassed within the general standard of reasonable or due care under the circumstances that is owed by a physician to an older patient under his or her care. Good, prudent medical practice demands it, as do voluntary guidelines such as the ethical codes of relevant professional associations. The Federated Council for Internal Medicine has stated, "One important demand on the physician caring for the elderly is to develop the managerial skill and knowledge need to mobilize health care and social service resources for the benefit of the patient. Optimal care requires cooperative participation of the several health professions and several types of community agencies."

Negligence may be defined as the unintentional or accidental deviation from acceptable professional standards. A negligent omission or bypassing of an opportunity for full interprofessional cooperation, not to mention any affirmative, intentional interference with such interaction, should render the offending physician legally answerable for any injuries suffered by the patient as a direct consequence of the omission or error. As one specific application of this argument, liability in a number of malpractice lawsuits has been predicated on a failure of adequate communication of patient care information between the attending physician and other health care professionals who were involved in the care of that patient, where that failure led to deleterious clinical actions or omissions.

Second, the proposed duty of interprofessional cooperation on behalf of the older patient's best interests derives heavily from the physician's well-established legal duty of nonabandonment. A physician who voluntarily agrees to serve an individual, and on whose medical care that individual thus comes to reasonably rely, risks being found guilty of abandoning the patient if he or she does not cooperate completely with other professionals who are also working to alleviate the older patient's difficulties. Such cooperation should take the form of exchange of information, assessments, and strategies (assuming, naturally, the patient's permission for such exchange), and should be considered an inherent and continuing obligation of the physician-patient relationship, whether that relationship is ongoing or has been terminated. Although there is not much current case law specifically on this point, a strong position may be posed that legal liability should be, and in a factually appropriate case likely would be, imposed where failure to join efforts with an older patient's other service professionals in the sharing of information, assessments, and strategies directly contributes to the nonrelief or the worsening of the older person's interdisciplinary problem.

Consultation and referral between physicians raises especially interesting legal implications, and those issues are likely to become more complex with the rapid growth of new medical practice environments such as Health Maintenance Organizations (HMOs), Independent Practice Associations (IPAs), Preferred Provider Organizations (PPOs), and other forms of corporate medicine. There exist acceptable, and even compulsory, clinical indications for patient referral and consultation. At the same time, care must be exercised to avoid any conflicts of interest in patient referrals and consultations; for example, the legal and ethical prohibition against fee-splitting must be avoided. Also, diligence must be used in the selection of other professionals to whom referrals and consultations must be directed. Although a physician is not an absolute insurer of the quality of care provided by colleagues whom that physician involves in the patient's care, potential liability looms for negligence in initial selection. As mentioned earlier, patient consent must be obtained for referrals and consultations. Finally, where a physician becomes aware of errors committed by colleagues to whom patients have been referred that threaten the well-being of those patients, there may be a legal duty on the referring physician's part to intervene to protect the patient from foreseeable, preventable harm.

Legal theory aside, as a pragmatic matter, effective interprofessional cooperation serves the legal self-interest of all involved parties. Serious legal jeopardy exists that, where there is unresolved tension among health care professionals jointly caring for a particular patient, some disgruntled team member may go to the courts to seek formal intervention. It was a dissatisfied nurse, not a family member, who went to the local district attorney and initiated legal proceedings in the much-publicized California Barber case, the only criminal prosecution in this county against physicians for withdrawing medical treatment from an irreversibly comatose patient. Not incidentally, that case ultimately ended in complete vindication of the defendant physicians, but only after expenditure of a tremendous amount of money, time, and emotional turmoil. In the original Baby Doe case in Indiana, the advocacy group challenging the actions of the infant's physician and parents were alerted and instigated by a disgruntled nurse in Baby Doe's hospital.

Where health care and human service professionals feel frustrated and left out of the process of decision making and caring for a patient, there is a risk that they will invoke the legal system as an attempted last source of redress. Full interprofessional cooperation, besides in most instances leading to better substantive results, also psychologically defuses potential resort to the legal system. A meaningful interprofessional process for deciding upon and implementing patient care encourages each professional, who has a separate set of values, agendas, and needs, to express himself or herself within the collaborative process, rather than outside of that process (i.e., within the legal system).

Barriers to Cooperation

In far too many actual cases, interprofessional cooperation in the delivery of health care and human services to older people leaves much to be desired. While case management and continuity of care are the popular buzzwords of the moment in gerontological circles, the actual level of interaction among the older person's simultaneously functioning service providers often deviates from the clinically ideal and, it is submitted, from the ethically and legally acceptable as well.

Several possible explanations suggest themselves for this shortcoming. These include, most prominently, narrow role self-definitions, excessive professional pride (called by sociologists "disciplinary ethnocentrism"), natural turf-protecting instincts, stress, and nonexistent or insufficient education and training in effective techniques for interprofessional cooperation. Financial reimbursement is not generally available for time spent in interprofessional cooperative activities. Among other barriers are the lack of a common interdisciplinary vocabulary, value perceptions that lead to different outcome goals, and an emphasis upon collection and use of different data for problem solving. In addition, socialization to the norms of any given health profession helps to support insularity, and recognition usually accrues to health professionals for their own disciplinary work, not for interdisciplinary ventures. Whatever the barriers are, physicians should be aware of the ethical shortcomings and potential legal ramifications of impinging on an older patient's well-being as a total person by failing to adequately cooperate with other health care and human service professionals on behalf of the person whom they serve in common.

Mechanisms for Interprofessional Cooperation

The barriers to effective interprofessional cooperation on behalf of older patients are significant, but by no means insurmountable. On the contrary, several mechanisms exist for fostering such collaboration in an ethically and legally responsible fashion.

One long-recognized and well-developed strategy is the interdisciplinary team conference or team meeting approach. This approach may vary in terms of composition, structure, scheduling, functions, process, and limits, depending upon the unique needs, resources, and personalities of the particular health care institution. The degree of formality versus informality may also vary among institutions. There probably is no set blueprint or paradigm to be emulated. What is important is that there be some regular, established, recognized means within each health care setting for open and honest interdisciplinary communication and exchange of information and ideas about older patients who are being served simultaneously by a multiplicity of health care and human service professionals. Ordinarily, the law presumes an implied waiver of patient confidentiality concerning medical information to permit, and indeed encourage, the sharing of information about a common patient among different health care and human service professionals serving that patient.

Another possible mechanism for interprofessional cooperation in certain circumstances that has been garnering a good deal of public attention lately is the Institutional Ethics Committee (IEC). The Institutional Ethics Committee concept, which has at its heart the assumption of broad interprofessional collaboration, was originated over a decade ago by a physician (a pediatrician) in an article published in a law review. It was endorsed by the New Jersey Supreme Court in 1976 in the famous Quinlan decision as a mechanism for decision making concerning termination of treatment for certain mentally incompetent patients. Subsequently, courts in several other jurisdictions have accepted the IEC as a valuable aid to grappling with these most difficult questions.

The IEC concept really gained public prominence just a few years ago, however, when the federal Department of Health and Human Services suggested it as one means by which health care institutions could comply with the requirements of the Baby Doe regulations governing the medical treatment of handicapped newborns. Although that use of IECs is obviously nongeriatric, there is no reason that the IEC device cannot be used to facilitate decision making, and subsequent action, for other patients, including (perhaps especially) the elderly.

There are still many unanswered administrative and legal questions concerning IECs, including: proper functions (policy making, education, individual case involvement); composition (to what extent it should be interdisciplinary and what disciplines should be represented and in what proportions); process; methods of activating involvement (who can bring a case to the attention of the IEC, and on a voluntary or a mandatory basis); effect of decisions (advisory versus binding); confidentiality versus discoverability of IEC records; and liability exposure of IEC members and the sponsoring institution for IEC activities. There is great confidence, though, that the IEC concept of interprofessional collaboration and consultation, if implemented thoughtfully and subscribed to sincerely by a variety of concerned health care and human service professionals, holds the potential for "better" substantive decisions ethically, strengthening the health care institution's legal defense against external challenge of patient care decisions and actions, and defusing potentially legally volatile interprofessional disputes about patients within the institution.

At the heart of any serious effort to increase the quantity and quality of interprofessional health and human services collaboration on behalf of older individuals must lie a firm educational component. Both future and present health and human service professionals must be taught not only the clinical wisdom and therapeutic potential of thorough interprofessional cooperation, but also the ethical and legal considerations making such cooperation imperative.

Every student preparing to deliver health care or other human services to the aged should have the opportunity to observe positive faculty role models engaged in interprofessional and interdisciplinary activity, and to practice their own future interprofessional role behaviors. Those who do the modeling will need to be secure in their own roles, their regard for each other's expertness, and their own place on the team. They must believe in the concept of collaboration, their own profession's role in health care and human services for older people, and the necessity for the unique contributions of the other professions.

Conclusion

In conclusion, cooperation and collaboration among the various types of health care and human service professionals who serve older persons is an idea about which we need to think seriously, and a practice that we need to implement vigorously and enthusiastically. It is necessary if we are to address properly the patient's best interests in helping to resolve physical, mental, psychological, social, economic, legal, and spiritual vicissitudes. It is useful in providing psychological support and encouragement to reduce the feelings of stress and isolation that frequently victimize professionals who labor in this challenging area and that may impair their own well-being, as well as their performance. Last but not least, interprofessional cooperation in the practice of geriatric medicine is essential to fulfill the ethical mandates that have been discussed in this paper, and it is proposed that the physician's legal duties be extended to make those ethical mandates enforceable.

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INTRODUCTION

DEVELOPMENT OF INTERPROFESSIONAL EDUCATIONAL EXPERIENCES

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The four papers which follow all address issues to be considered in developing interprofessional educational experiences. While much attention has been paid to process issues within interprofessional experiences and to appropriate content for interprofessional groups of students, little has been written about developmental approaches. These four papers suggest a variety of points to consider.

Douglas and Gillespie describe a professional development seminar for allied health graduate students that is also appropriate for presentation as a workshop. Participants share life experiences in this open systems approach to career development, breaking interprofessional barriers and developing new support networks in the process. Monroe-Clay describes two courses for students in social work and health administration, one of which paid overt attention to team development. The results of this experimental design support the need for teaching teamwork consciously. Billups and Julia performed a content analysis of a sample of literature from several health and helping professions and identify multiple sets of subprocesses to be considered in the general education of health and helping professionals and in preparation for teamwork. Finally, Grant and Casto contrast a content-oriented curriculum model with a process-oriented model and discuss the utility of each for interprofessional education.

INTERDISCIPLINARY LEADERSHIP DEVELOPMENT

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Conceptual Framework

Nurturing and developing leadership abilities is the goal of many graduate and educational programs. Newer curricular models and courses that support leadership development in interdisciplinary settings should be assessed if the allied health professions are to move ahead and assume responsibility for their own future.

Identified skills for leadership development include decision-making, career planning, networking, and consulting. A model that utilizes the professional development seminar format for leadership development and includes the aforementioned skills has been in operation since 1981 in the graduate program of the School of Allied Health Professions at the University of Connecticut. The course, which is taken concurrently or prior to the practicum experience, provides the graduate student with the opportunity to integrate prior learning, examine professional and career goals, develop new skills for leadership, and plan a practicum, which provides them with the needed experience to meet professional and personal expectations.

Both the course and the program are interdisciplinary and multidisciplinary. Screening for potential leaders begins with the admissions process which includes a personal interview. Applicants are evaluated on the following criteria: leadership experience, professional activities, ability to set professional goals, and communication skills. Students represent a wide range of disciplines, hold appropriate professional licensure of registration, and have worked in the field for one or more years.

A recent study of student characteristics indicated that the model student was a 29-year-old female employed full-time with three years of work experience in a health care setting. These characteristics coupled with such qualities as self-determination and a high level of commitment to graduate school appear to be important for success. Students who select an interdisciplinary approach to graduate studies also value the development of skills that promote leadership.

Faculty who teach such a course must support and demonstrate teaming skills. They should represent a health discipline but must be transdisciplinary in attitude. Students should be able to look to these teachers as mature role models who exhibit mutual respect for each other's unique qualities. In this particular case, the faculty for this course included a registered dietitian and licensed physical therapist. Teaching styles for each was different. At times the learning situation demanded an interactive style while at other times the didactic approach appeared more appropriate.

The faculty role in the seminar was one of facilitation, providing the environment for the students to discover and to develop their own direction. Values for the individual were clearly imparted as well as individual responsibility for growth of self and support for the group. The faculty could provide a theoretic framework--a structure--and facilitate the process but could not discover for them. Avoiding telling them what they had learned and allowing them to articulate the learning was a norm in the seminar which is unlike other forms of higher education.

One member of the faculty team had extensive training in program development, health teaming, open systems management, and interdisciplinary education. Her learning had been more self-directed and experiential than her partner whose education had included scholarly analyses of career development and choice in women, androgenous management, theories of success and futuristics. This blend of style, content, and format created an open environment for the exchange of confidences and ideas that fostered discussion and transdisciplinary development. The students, in most cases, shed parochial attitudes associated with their disciplines and were able to plan for their futures in less traditional ways. Participants in the seminar developed new roles, crated interdisciplinary support systems and networks that transcended their disciplines.

Seminar Design: Theoretical Base

The model used for the design of the seminar was developed from three theory sets. Experiential learning, systems theory, and planned change, with an overlay of career development principles. The model had to provide opportunities for each individual to "discover" their career paths and to develop skills in self assessment and planning that would lead to the development of a practicum plan linked with their long-term goals. At the same time the model had to facilitate the development of a support system, a colleague network. The thread that continued throughout the seminar was a set of activities that had the goal of expanding and extending the horizons of the students toward the direction of leadership in allied health.

Each session had three components: an experiential learning activity that combined individual work and feedback from the group; a cognitive section with discussion of the issues in allied health leadership development and the methodology of action research; and finally an opportunity to reflect on the learning that took place with the group and to note this outcome in a journal. Each section included activities designed to build interactive skills for the development of a colleague network. (See Appendix)

The basic idea for the design originated with a workshop/laboratory designed by a group of faculty from the National Training Laboratory Institute entitled "The Individual and the System" first offered in 1977. The laboratory was designed with the purpose of assisting the participant to become a "more fully functioning individual." The basic goal of the lab was to develop a perspective from which we can better manage the many worlds we live in." The program was designed to deal with "the paradoxes and conflicts that occur at the interface of the individual and the many systems that we live in, that we influence, and by which we are influenced."[1]

The first theory comes from a developmental interpretation of learning theory described by Wolfe and Kolbe[2] where learning is viewed as the central life task and the core process of development and the active/reflective process is a major dimension of cognitive growth. The difference between learning by merely a developmental process is viewed as a function of learning by experience. Personal development is characterized by increasing self insight and recognition/discovery that accepts the complexities of the human existence. Too often, we as faculty felt that the driving forces for learning were merely adjusting or coping to the many stresses in their lives rather than becoming developmental.

In applying this theory to the seminar, each stage of the model was incorporated into the design. The activity of developing a professional development plan and sharing the plan provided the concrete experience; the reflective observation stage took place in and outside of class, and was recorded in the journal; the reading on the issues; and finally the active experimentation phase was exemplified in the developing plan. It too, provided a concrete experience which closed and continued the development cycle.

The second theory set was grounded in systems theory as it applies to social systems. Using "open systems planning" to affect change became the structure of the seminar. The approach was selected because it was clear that each student was involved in multiple social systems. Unlike the NTL workshop where the focus was on establishing a fit between the individual and one organization, this graduate seminar had to expand that view to include the many organizations or "domains" described in systems theory to achieve a realistic picture of the world in which they live. The creation of an open system with flexible boundaries allowed this conceptualization to take place.[3]

The students were asked to conceptualize the impact of these multiple systems on their lives and analyze their responses. The focus for the action planning was the practicum although some students broadened it to the development of a career path. Each session followed the steps in the action research model.

Finally, the principles and some of the techniques of career planning were used. First, the class started with history which included the biographic data of significant events. A series of self assessment instruments were used to assist the students in identifying strengths, preferences, and a picture of how they were viewed by those around them. Keeping the focus on the practicum grounded them in the "here and now." Throughout the seminar, it was necessary to reinforce the concept of choice. Examining the blocks to risk-taking and encouraging them to view their lives creatively was a constant thread.[4]

Throughout the entire seminar, the design emphasized the importance of building a support system and a colleague network. Developing communication skills, group process skills, feedback, and consultation skills were all included. Therefore, the foundation of transdisciplinary activities was grounded in strong relationships, and common professional goals.

To support the cognitive development of the students, each session included a discussion. The topics ranged from issues in the future of allied health education and practice, women in leadership roles, to concepts of social change and interpersonal growth. Descriptions of the models and their theoretic foundation were also included. The thread that continued through all sessions was the reference to the dimensions of leadership indicated in each issue or concept. Implicitly, the discussion was designed to develop an awareness of the leadership roles that each student either would be accepting in the future or already had assumed. Examples from the experiences of each student were used in the discussions.

The final component of the seminar had the long range goal of developing an awareness in each student of the leadership function of mentoring. The faculty goal was to enhance the value for the role of mentoring through the early reference to the individuals who had mentored the student to the support and consultation they provided their colleagues in class as well as their current models.

Evaluation and Application

Learning in the graduate program has been structured so that the student moves toward greater autonomy as he or she progresses toward the seminar and the practicum. This seminar course has evolved over five years and been closely monitored. Both formative and summative evaluations have produced data that showed a high level of agreement with course objectives. These objectives are to:

1. Formulate and integrate practicum objectives germane to the student's academic program and career goals.

2. Discuss and analyze trends relevant to the field of allied health and individual career development.

3. Analyze and formulate appropriate career goals and strategies.

What students report liking about the course includes group support and interaction and an openness of instructors and class members to share and provide feedback. Almost all the students stated that the course was thought provoking and provided an opportunity to synthesize all that they had learned.

Case study A. O. illustrates some of the common concerns and issues recently seen in our students. These are: the impact of gender on career choice, career expansion and/or extension, value for leadership, risk taking, consequences of professional identify and constraints, and continuing in a system that stifles creativity and growth.

Case Study A. O.

A. O. is a 31-year-old medical technologist who worked for some years in the transplant service of a large teaching hospital where she was responsible for histocompatibility typing. She was very sure that she wanted a masters degree and realized that the laboratory hierarchy holds academic degrees as the bench mark of success and management responsibility.

During the seminar, A. O. was able to sense the uncertainty of her career goals and the demands or "domains" in her life. One process area that interested her was an analysis of leadership. The reflection and analyses of leadership in women helped clarify the characteristics of her responses to those in the laboratory and her socialization as a woman, eg. not to question authority, inability to take risks, and masking creativity. The use of a "Strength Deployment Inventory" identified her preference for analysis and logic.[5] However, a subjective assessment of her activities indicated a value for the human component in the organization. Later in her role as laboratory manager she introduced "Quality Circles" in the laboratory as a participatory approach to management.

During this process her perspective changed and she began to analyze her abilities and future employment opportunities. A need for new challenges and avenues for creativity emerged. A.O. went on to design, plan, program, and test a system to record and follow-up severe trauma cases. This was the first step in the transdisciplinary process and moving away from her earlier career as a medical technologist.

Conclusion

This course, which has been designed for the experiences health professional, fosters interdisciplinary learning and interaction. All learning activities focus on the individual and the forces that impact on his/her personal and professional life. Leadership or leadership development is an important component of the process for it implies moving ahead and taking others with you.

What has been gained from this model is a greater understanding of transdisciplinary process. We believe that before any professional can transcend his/her discipline, he/she first must be part of that discipline, accept its professional values and ethics, and recognize inherent competency issues.

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APPENDIX

PROFESSIONAL DEVELOPMENT AN INTERDISCIPLINARY APPROACH

FIVE SESSIONS: 2 1/1 hours each session

SESSION I. "THE HERE AND NOW: HOW I GOT HERE."

Pre-work:
Students will be asked to develop a biography of critical incidents in their adult lives that they feel have influenced them.

Class:
1. Brief discussion of the steps in Open Systems Planning

2. Life Map

Students will draw a life map of the critical events in their lives and identify the people that have influenced them.

Each student will be asked to present this map to the class. The students are encouraged to ask questions and make observations on the trends that are evident on the map.

3. Learning Journal

When this part of the session is complete, the students will be given a journal and asked to note the learning that they have experienced.

Purpose:
The major objective of the session is to begin to build an open climate for communication for the students to share their lives as they have been and are now. This hopefully will have the outcome of a heightened awareness of the similarity of their career paths.

Secondly, it will begin to provide an analysis of the trends in their lives and the factors that have shaped and influenced them.

Third, the use of a journal will help to identify the impact of the experiential learning by a reflective process from which basic concepts or theories can be identified.

Finally, the use of the group as a facilitator of learning will encourage each individual to begin to participate in the development of a support system. (5)

SESSION II. "THE HERE AND NOW: WHAT'S AROUND ME:"

Pre-work:
Each student will be asked to complete a personal assessment using an instrument like the Strength Deployment Inventory.(6)

Purpose:
The inventory is designed to help assess the strengths used in relating to

others under conditions when things are going well and when there is conflict. Two additional components of the instrument series provide feedback from others and identify the rewards of a given position based on the interpersonal requirements of the position.

Class:
1. Increased Self Awareness

Students will share what they discovered with the personal assessment instrument. Questions to use to stimulate discussion are: Are there any surprises? Is there congruence between how they perceive themselves and how others perceive them?

2. Open Systems: Fit Between Individual and the Environment

Students will draw a diagram of the various "domains" or systems that are acting on their lives. The use of a circle with the individual in the center and the forces depicted on the outside is a helpful mode. The diagram should reflect the intensity as well as the identity of the external influences. The diagram should also reflect the response to these forces in terms of percent of time and effort, conflicts, congruences, interdependencies, joy, and pain, etc.

Again, each student should share this with the group explaining the forces and the responses.

3. Discussion of the research and the issues that are common to women in leadership positions, the trends in the allied health professions, and adult learning.

Purpose:
The major purpose of this session is to have the students achieve a realistic picture of their lives, their modes of behavior from both their own eyes and those of the class. It is common that they will realize the similarities rather than the differences.

Secondly, from the research, they will achieve further validation of their position.

The sharing and writing in the journal will continue the process of building a support group and reinforcing the experiences.

SESSION III. "WHERE AM I GOING?"

Pre-work:
Students should come to class with some explicit statement of where they think they are going--a direction, a goal, or a mission or purpose.

Class:
1. Trends and Direction

Students will review the "map" and the systems developed in the first two sessions with a statement of where they think they are going. The student will complete the statement, "As I see I am headed towards..."

2. Career Goals and Practicum Objectives

Students will state the goal that they have as they see it now. This may be on a continuum from very vague to very specific. A description of their practicum objectives would also help.

Finally, they should address the question with the group, "If nothing different happens where will I be in ( ) years?" "Is that where I want to be?" Is there a connection to the practicum?

3. Discussion

The planning process will be discussed with a theoretic reference to direction planning as opposed to goal setting. Further discussion of the barriers to human development, to learning, and to change is helpful. Too, discussion on the power, influence, and choice that we have as individuals will hopefully empower them to explore options.

Purpose:
The major objective of this session is to clarify the probability of achieving what they have set as goals or to point out the direction that they are headed. It is important that no valuative comments be made by faculty or other students, just observations from the data presented.

Secondly, it is hoped that the discussion will help to clarify the opportunity that each person has to make a choice about their career path.

Third, the congruence between the goals and the graduate program practicum plans developed by the student will ground them in the "here and now" and establish connections between the program and career.

SESSION IV. "WHAT DO I WANT TO BE? PLANNING FOR THE FUTURE: PLANNED CHANGE"

Pre-work:
Students should come with an analysis of their status, their plans, and some ideas or strategies to accomplish their goals. A work sheet highlighting the questions from the previous sessions including a matrix of goals, strategies, and "next steps" is helpful.

Class:
1. Discussion of Planned Change and Change Theory.

2. Action Planning

In diads or triads, students will share the analysis of their status and action plans. Each student in the small group will be expected to provide feedback as consultants on the plan. Efforts are made to encourage trying at least two or three new ideas. The action plan could include two dimensions: the practicum and the longer range and career plan.

After this exercise, it would be important for the students to share their impressions, conclusions, etc. with the entire group.

Purpose:

Using several approaches to change and personal growth, the students should be aware of the process needed to make choices about their future, whether immediate or long-term.

Secondly, the value of looking at themselves through the eyes of their colleagues should have the effect of broadening their vision and, therefore, the options that could be open.

Third, the process design continually reinforces the building of the support system which transcends discipline.

Finally, the process of consultation and feedback will build skill in the future activities of being a mentor and a leader.

SESSION V. "TOMORROW I WILL START BY...: THE ACTION PLAN"

Pre-work:

The plan should be finished. Included will be measures that the student selects as indicators of accomplishment.

Class:

1. Review Concepts of Evaluation and Assessment.

2. Presentation of the Final Plan.

3. Self-Assessment of Learning and Implications for the Future.

4. Plans For Follow-Up of the Support System.

Purpose:

This session should emphasize the completion of one step in the planning process focusing first on the practicum plan as the "here and now" and then on a value for continued growth.

The focus on the learning process should emphasize the value of experiential learning as a base for action research as well as for personal and professional development.

Finally, the importance of monitoring and evaluation of the plan should include all the involved social systems.

THE INFLUENCE OF FORMAL PREPARATION FOR INTERDISCIPLINARY TEAMWORK ON TEAM KNOWLEDGE LEVELS

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The literature in the health care fields is replete with evidence that teamwork can greatly improve the service provided to clients and patients as well as the satisfaction of the team members themselves.

Yet it is also clear that interdisciplinary health care teams often function poorly. Mailick and Ashley (1981) identified problems in combining collaboration activities with advocacy for clients. Problems involving a hierarchical model and physician dominance have been described by many, including Dingwall (1980). Differences in time orientations causing conflict and misunderstanding among members of interdisciplinary teams are noted by Huntington (1981). Evers (1982) observed that only in a few circumstances did care of the geriatric patient match the positive images of teamwork portrayed in the professional literature. Greene (1984) identified obstacles to effective collaboration between child psychiatry and pediatrics. These included different time constraints, different orientations concerning diseases and cures, and rotating schedules. So, there are often difficulties in operationalizing an effective model of collaboration in health care teams.

Preparation for Teamwork

Team communication, understanding of differences in professional cultures, relationships, role assignments, and ultimately, team delivery of health care can be improved. There is substantial evidence that team building, education, and training do facilitate effective collaboration. Papers presented at this conference over the years attest to the usefulness of a wide variety of models for enhancing the skills of members of interdisciplinary health care teams.

The author's experience in social work practice, research, and adult education has convinced her of the utility of an "ecological perspective" in health care and professional training. The term "ecological perspective" coined by Germain and Gitterman (1980) connotes a vision of the individual as "person-in-environment." This is a particularly meaningful way of conceptualizing the complex whole of the practice situation. It is readily applicable to all levels and contexts of health team care.

In her early writing, Perlman (1957) discussed the "physical-psychological-social, past-present-future" configuration of the person. Her reference to the dimension of time provides a means for further illuminating the conceptualization of the human lives professionals encounter in health care. It is this totality of biologic, psychologic, cultural, social structural, and past-present-future persona which must be considered in any attempt to understand individuals and group of patients and clients.

It is this same gestalt to which educators and practitioners must relate in preparing men and women for effective interdisciplinary team practice. This frame of reference provided a basis for the author's belief that preparation for successful interdisciplinary health teamwork is probably most useful when it is multidimensional and multilevel. Health care professionals need to be exposed to team learning and development experiences on at least three levels: 1) the preservice level in the classroom; 2) during clinical internships; and 3) in subsequent professional practice. Teamwork preparation must also be multidimensional. It needs to take into account biopsychosocial system influences and temporal effects. It should allow for sensory-motor as well as cognitive learning (Knowles, 1978; Lovell, 1980). Process should be emphasized in an environment promoting inquiry and risk taking.

This paper reports on an attempt to assess the effects of a team preparation strategy that occurs on one of these three levels in the classroom prior to full professional practice. It compares the team knowledge scores of social work students exposed to a multidimensional (didactic, laboratory, and field) teamwork course with students enrolled in a human resource management course. In the latter, students were expected to acquire and apply knowledge of health administration issues and concepts. Enhanced understanding of individual and organizational behavior were expected outcomes.

The Team Education Model

The course in teamwork evolved out of team training experiences which the author developed during the late 1960's and early 1970's while on the faculty of the University of Illinois School of Social Work in Urbana, Illinois. This first model of team training and development with graduate social work students was experimental, process oriented, and extemporaneous. It included role playing, group analysis of actual work with clients, videotape feedback, and team discussion of team issues and concerns.

Over the years the model evolved into a formal course taught in the undergraduate social work major at Governors State University. This course, referred to in this report as TMW, is open to undergraduate and graduate students, the majority of whom are at a preservice level of professional development. It is required for all social work students but occasionally attracts students from counseling, psychology, education, communication, and nursing. The author provides instruction for the course, primarily serving as a facilitator and guide. In the course students study four critical dimensions of team knowledge: 1) Personal-Interpersonal; 2) Team Environment; 3) Team Processes; and 4) Team Leadership. This conceptualization of Team Knowledge developed by the author through previous research, is explored in lectures, class discussion, personal introspection, library research, value clarification, and various laboratory exercises designed to immerse students in simulated team experiences. For example, students analyze their own interpersonal relationships orientation and their attitude toward themselves in relation to the world and others. They work on team problem-solving, communication, decision-making, and conflict resolution skills among other teamwork tasks. Learning experiences are augmented by videotape feedback and analysis, written examinations, and a substantive field project which requires that a student team conduct an observation and analysis of an actual health or human services team. Students also engage in a peer assessment of the behavior of fellow team members.

Students have generally evaluated this course experience as positive and informative. Many of those who function on teams at work or as volunteers report that the class significantly enhances their understanding of team dynamics and their own functioning on those teams. When students enter field placements, the culminating learning experience at the end of their social work program, the learning from this class is frequently cited as facilitating their team performance in the field agency. Positive as these reports have been, they did not provide a scientific measure of student acquisition of team knowledge. The research on which this report is based is a consequence of the recognition of that fact in evaluating the course.

This study focused on a measure of team knowledge on a cognitive level rather than through measurement or evaluation of team behaviors. However, behavior is an important part of the learning experience in the course, and as such, contributes to the knowledge scores.

The human resource management course is a graduate course in the health administration major, hereafter referred to as HRM. Lecture and class discussion are the primary modes of instruction and learning. For this particular class there were weekly reading assignments, three major examinations, and, in class, students engaged in analysis of examples of personnel administration problems. The instructor focused on helping students to recognize that although there are certain goals they need to achieve as managers, they must accomplish these in the face of many pressures. These include institutional demands, employee morale, and the legal ramifications of their decisions and actions. Although facilitating effective teamwork was not a stated goal of this course, students were expected to apply human resource management and organization theory to individuals and groups they would encounter in various types of teams. Students were expected to learn how to apply human resource management and organization theory to real-life situations.

Methodology

This study is part of an ongoing investigation of teamwork knowledge and skill development conducted by the author over the past several years. Reports of the earlier research on which it is based may be found elsewhere (Monroe-Clay, 1986).

The Team Knowledge Survey was administered to the students in the two courses at the beginning of the course and again at the end. Students could enroll in either course at almost any point in their program. Both courses drew students from several different health and human service majors; although the teamwork course included a majority of social work students.

The Team Knowledge Survey was developed by the author and used in previous team studies. This instrument, consisting of 49 Likert-type items, provided a global team knowledge score for each subject. Four scales embedded into the instrument examined knowledge and skill in the personal-interpersonal, team environment, team leadership, and team processes dimensions. Scores were provided for each of these dimensions. Items requesting self-reported descriptive information were also included in the instrument. These focused on education, age, race, gender, previous team experiences, previous preparation for teamwork, and professional field.

There were three major questions addressed in this study: 1) Does formal preparation for teamwork significantly influence team knowledge levels? 2) Is there a significant difference in the team knowledge levels of subjects who have some formal preparation for managing individuals and groups in organizations? 3) Are there factors other than class experience which might influence team knowledge levels?

The hypotheses emerging from these questions were as follows: 1) Students exposed to formal team learning experiences will obtain higher team knowledge scores after that exposure than before such experiences; 2) Students who have had a human resource management learning experience which does not include a focus on teams or teamwork, will have similar before and after team knowledge scores; 3) Students engaged in normal team learning experiences will obtain higher team knowledge scores on post-tests than those who are provided a learning experience in human resource management; 4) Certain individual characteristics of students in both the team class and the management class will be related to team knowledge levels.

T-tests were used to compare the means of the two groups; F-tests were used to compare differences between the group means of the pretests and post-tests of both groups when selected individual characteristics were examined.

Findings

The pretest was administered to 17 students in the HRM course; due to the absence of one class member, 16 students completed the post-test. The pretest and the post-test were administered to 24 TMW students. This very small sample size requires that results be viewed as specific to these groups only. Nevertheless, they can provide useful information pointing toward future investigations.

Table 1 indicates that both classes had similar distributions of men and women, and followed a typical pattern of women having greater representation in the allied health and human service fields. The TMW class was a somewhat younger group than the HRM class. The HRM class had slightly more previous team preparation experiences than the teamwork class, as well as more team experience and longer membership on a current team. Members of the HRM class had also attained a higher level of education.

TABLE 1

PROFILE OF THE SAMPLE BY SELECTED DEMOGRAPHIC CHARACTERISTICS

Characteristics	Class			
	TMW	%	HRM	%
Gender				
Women	18	75	12	70.6
Men	6	25	5	29.4
Age Range				
<20	0	0	0	0
20-30	11	45.8	4	23.5
31-40	10	41.7	8	47.1
41-50	3	12.5	4	23.5
51-60	0	0	1	5.9
Race				
Asian	2	8.3	2	11.8
Black	11	45.8	6	35.3
Native American	1	4.2	0	0
Caucasian	9	37.5	8	47.1
Previous Team Experience				
First experience	7	29.2	3	17.6
Once before	5	20.8	1	5.9
Twice before	4	16.7	1	5.9
Three or more times before	8	33.3	12	70.6
Previous Preparation for Teamwork				
No previous preparation	14	58.3	7	41.2
Personal reading or other forms of individual study	3	12.5	3	17.6
Short-Term Seminars	6	25.0	4	23.5
Length of Membership on this Team*				
6 mos. or less	13	54.2	4	23.5
7 -12 mos.	3	12.5	2	11.8
13-18 mos.	2	8.3	1	5.9
18-24 mos.	4	8.3	1	5.9
>24 mos.	2	8.3	5	47.1

TABLE 1 (Continued)

Characteristics	Class			
	TMW	%	HRM	%
Educational Background				
High School or below	0	0	0	0
Two-year college	20	83.3	0	0
Bachelors	4	16.7	15	88.2
Masters	0	0	2	11.8
Doctorate	0	0	0	0

Note: Percentages may not total 100 percent due to missing data.
*This item refers to any current team membership and was explained to subjects prior to administration of the survey.

Table 2 and Table 3 show the team knowledge levels for both classes and the results of the T-test for significance.

There were no statistically significant differences revealed between the pretest or the post-test TMW and HRM knowledge scores. The TMW global knowledge scores increased by five points and the HRM by two points from pretest to post-test. Each of the team knowledge dimensions revealed slight increases of one or two points, except for the Personal-Interpersonal. Here, there was a very slight decrease. None of these were statistically significant. It is interesting to note that in this dimension the TMW and the HRM post-test means were identical.

In Table 4 selected sample characteristics were examined in relation to their possible effect on team knowledge pretest and post-test scores. Education, length, and experience were selected for analysis because they were identified as having a strong likelihood of affecting team knowledge levels.

For pretests, Team Processes was the primary team knowledge dimension indicating possible effects of the characteristics of education, length, and experience. It is noted that the highest possible scores for global team knowledge and for each of the sub-scales were considerably higher than the maximum achieved by the study sample. If scores at this maximum or above are classified as high, scores from the mean to this point as moderate, and scores below the mean as low, then the study sample might be characterized as having low moderate knowledge levels.

TABLE 2

GLOBAL TEAM KNOWLEDGE LEVELS FOR TMW AND HRM CLASSES*

Classes	N	x	sd	T-value	sig.
All Classes	41	124.585	20.915		
TMW (pre)	24	123.792	18.571	-.97	.337
TMW (post)	24	128.292	13.063		
HRM (pre)	17	125.235	16.705	-.38	.706
HRM (post)	17	127.313	14.41		
TMW (pre)	24	123.792	18.571	-.26	.800
HRM (pre)	17	125.235	16.705		
TMW (post)	24	128.292	13.063	-.22	.825
HRM (post)	17	127.313	14.416		

*Maximum possible points for global team knowledge = 245. For this sample, minimum was 0; maximum was 156.

TABLE 3
LEVELS OF TEAM KNOWLEDGE DIMENSIONS
TMW and HRM CLASSES

Knowledge Dimensions	N	x	sd	T-value	sig.
Personal-Interpersonal					
TMW (pre)	24	38.125	5.144	.41	.694
HRM (pre)	17	37.411	6.011		
TMW (post)	24	37.250	4.296	.0	1.00
HRM (post)	17	37.250	4.025		

Table 3 (Continued)

Knowledge Dimensions	N	x	sd	T-value	sig.
Team Environment					
TMW (pre)	24	18.5833	4.827	-1.01	.290
HRM (post)	17	19.9412	3.269		
TMW (post)	24	19.125	3.651	-.73	.471
HRM (post)	17	19.937	3.130		
Team Leadership					
TMW (pre)	24	22.0417	5.974	.84	.404
HRM (pre)	17	20.5294	5.173		
TMW (post)	24	24.2083	4.969	1.36	.181
HRM (post)	17	22.0000	5.112		
Team Processes					
TMW (pre)	24	47.2083	6.613	-1.17	.248
HRM (pre)	17	49.6471	6.480		
TMW (post)	24	49.9167	5.216	-.21	.834
HRM (post)	17	50.3125	6.590		

For the pretests, when the TMW Team Processes Scores were examined neither education nor experience seemed to have an influential effect. However, length of membership as a separate effect was significant at a probability level of .026. There were no significant combined or two-way interactive effects. The interactive effects of length combined with experience for the HRM class influenced Team Processes levels. Here an F-value of 6.904 was significant at the .039 level. In addition, length of team membership, when education and experience was held constant, was highly influential on Team Processes scores, with an F-value of 11.971, significant at the .005 level. Previous experiences seem to "wash out" as having an important influence.

The TMW class also showed some influences of characteristics on Team Process Knowledge scores, but effects were not interactive. Length of experience again shows a statistically significant effect, the F-value of 5.019 having significance at the .026 level

TABLE 4

ANALYSIS OF VARIANCE OF TEAM KNOWLEDGE LEVELS BY EDUCATION, LENGTH OF TEAM MEMBERSHIP, AND PREVIOUS EXPERIENCE

Effects	F-value	d.f.	Significance
	Pretests		
Class	TEAM PROCESSES		
TMW			
Main Effects	2.752	7	.080
Education	.285	1	.606
Length	5.019	3	.026
Experience	1.950	3	.192
2-way Interactions	.874	5	.535
Education & Length	1.776	2	.224
Length & Experience	.360	3	.783
HRM			
Main Effects	6.572	8	.017
Education	.050	1	.831
Length	11.971	4	.005
Experience	.693	3	.581
2-Way Interactions	6.904	1	.039
Length & Experience	6.904	1	.039
		Post-tests	
(Global) TEAM KNOWLEDGE			
Main Effects	.181	9	.990
Education	.114	2	.893
Length	.268	4	.891
Experience	.258	3	.854
2-way Interactions	3.229	3	.082
Education & Length	.933	1	.362
Length & Experience	4.126	2	.059
Class	TEAM LEADERSHIP		
TMW			
Main Effects	.390	9	.909
Education	.985	2	.415
Length	.206	4	.928
Experience	.034	3	.991
2-way Interactions	3.656	3	.063
Education & Length	1.144	1	.316
Length & Experience	4.737	2	.044

Table 4 (Continued)

HRM			
Main Effects	2.244	8	.194
Education	8.688	1	.032
Length	.771	4	.588
Experience	.678	3	.602
2-way Interactions	4.870	1	.078
Length & Experience	4.870	1	.078
	TEAM PROCESSES		
TMW			
Main Effects	.608	9	.763
Education	.276	2	.766
Length	1.093	4	.422
Experience	.140	3	.933
2-way Interactions	4.171	3	.047
Education & Length	4.662	1	.063
Length & Experiences	3.331	2	.089

Post-tests showed influences in global team knowledge scores for the TMW class. Neither education, length of membership, nor previous team experience seemed to influence knowledge levels separately. However, the interaction of length and experience did affect these scores with an F-value of 4.126, significant at the .059 level.

Team leadership scores revealed the influence of educational background. An F-value of 8.688 was significant with a probability of .032. Although not statistically significant, a two-way interaction between length of team membership and previous experience was interesting, with an F-value of 4.870 and a probability of .078.

Team Process scores reflected influences of certain characteristics on the post-tests of the TMW class. Two-way interactions of education, length, and experience resulted in an F-value of 4.171, statistically significant at the .047 level.

Summary, Comments, and Conclusions

There are those who would argue that team knowledge and skills are learned best through actual team experience. Others believe that such a stance leads to time wasted in attempting to salvage the results of conflicts, inefficiency, and other problems of unsuccessful teams.

The fact that the HRM course was graduate level and the TMW course an undergraduate/graduate course did not initially appear to be a critical difference. Students can enroll in both courses at any point in their program. The course content did not appear to be greatly different in level of sophistication, complexity, or requirements. Although student characteristics were not viewed as unimportant, the primary focus of the research was on the influence of course content on knowledge levels.

Findings reveal that the ecologic perspective is indeed relevant as the author postulated early in the report. Course content is definitely not the only variable influencing outcomes. Respondent characteristics were found to have some important influences on results. These characteristics reflected the impact of other variables such as previous experience on teams. Although we do not know the direction or nature of these influences we might tentatively assume that they made a positive contribution because of the direction of the scores when tested through an analysis of variance.

The HRM was older, had achieved a higher educational level, and had more training for teamwork as well as more actual team experience. The fact that there were no statistically significant differences between the two groups might be interpreted as reflective of the success of the TMW class. In spite of a major difference between the two teams in professional experience, the younger, less prepared, mostly preservice students achieved team knowledge levels not greatly different from the advanced, mostly professional students with more actual team experience.

Yet, both classes began with very similar knowledge levels; post-tests revealed differences among them, but these were slight and not statistically significant. The low-moderate knowledge levels of both groups can be construed in some ways as supportive of the author's belief that the development of team skill and knowledge requires varied and multiple preparation strategies. Preparation for teamwork which focuses on the cognitive level is, based on this assumption, insufficient for the acquisition of high levels of team knowledge.

We might postulate that both classes had some modest influence on team knowledge levels. Yet, this conclusion seems to be too simplistic. Additional assessment of the learning in the courses might reveal differences in knowledge and skill acquisition which were not identified through the instrument. For example, experiential, process oriented assessment measures of teaming behavior might augment the team knowledge survey and greatly enhance understanding of what learning is actually occurring. Also, evaluation, perhaps longitudinally, of the team behaviors of the members of actual interdisciplinary health teams using varied assessment methods, is another possible direction holding promise for meaningful and useful information about team knowledge, its transmission, and ways to enhance its application.

Finally, the small sample size will not permit generalizations beyond the two classes. Because of this, the findings have been presented for heuristic purposes, hopefully leading to a point of departure for additional hypotheses and research. Evaluation of larger samples, different team preparation strategies, and students who are diverse as well as those who are similar to one another are all possible fruitful investigative directions. These studies should supply much work and, hopefully, many rewards for researchers, educators, and practitioners.

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INTERPROFESSIONAL EDUCATION FOR TEAM PRACTICE: SUBSTANCE AND SYSTEM

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Much of the observation of a third century ago holds true, regrettably, today:

> ...Students in medical school, nursing, social work, law... public administration and the graduate departments of the social sciences and humanities are being inculcated each with a different conception of human nature, of human conduct, with different beliefs, assumptions, expectations about people... These students are going out to practice... with what Veblen once called the "trained incapacity of specialists' unable to communicate or collaborate in their practice or even to recognize what other specialists see and do (Frank, 1954, p. 90).

While such pointed and historically well earned criticisms have persisted in varying forms (Barber, 1978; Yarmolinsky, 1978), increasingly the human service professions have acknowledged such critiques and have developed a host of interprofessional collaborative arrangements to improve communication, decision making and cooperative action. These interprofessional arrangements have resulted to a large degree in formal and ad hoc interprofessional teams.[1] Such teams have multiplied in response to many diverse and sometimes contradictory forces--not only the above mentioned acceleration of professional specialization and fragmentation, but consumer revolts based on mounting public recognition of many uncoordinated services, as well as general increased in size and complexity of organizations rendering service provision, and broadened conceptions of the interrelated nature of human problems and thereby the need for comprehensive professional approaches. As a consequence, interprofessional teams are observed operating today within and sometimes between human service settings such as (to name a few) hospitals, schools, rehabilitation centers, court systems, mental health agencies, public health programs, child guidance clinics, health maintenance organizations, industrial sites with employee assistance programs, health and welfare planning bodies, and prisons.

Perhaps of even greater interest is a view to the future (if a recent prediction by scholars of interprofessional teamwork has not already become a part of our present):

> ...it is highly probable that teamwork is likely to become more important in the years ahead. The movement toward specialization will accelerate, and the knowledge base of the professions will continue to expand. An increasing specialization means a continuing need for coordination. Thus, to avoid the problems inherent in the fragmentation of services, some form of team approach will be demanded (Ducanis and Golin, 1979, p. 169).

Basic Assumptions

A few basic assumptions enables the drawing of a relationship between the foregoing introductory comments as to past, present and future need for improved interprofessional teamwork and the discussion of the phenomenon of concern--interprofessional process-that is to follow.

A first assumption is that both appropriate utilization of an interprofessional team approach and successful achievement of desired outcomes are heavily dependent upon a cognitive grasp, sensitive understanding and careful handling by human service professionals of a number of specific and complex dynamics conceptually grouped under the generic label of interprofessional process. Broadly conceived, the dynamics of interprofessional process include both what a team does (its rational, task-oriented or goal achievement functions) and how it goes about doing it (its socio-emotional, maintenance-oriented or self-renewing functions).

A second assumption is that in the formation and conduct of interprofessional teams,no competently prepared professional participating in a "democracy of talents" need feel threatened that his or her area of specialization is to be depreciated or ignored. Modern thought and practice holds that the process of development of various living human systems (including interprofessional teams) require vital balances between polarities--e.g. differentiation and integration, and stability and change. Thus, the distinctiveness of richly diverse contributions from various professionals is integral to the success of the interprofessional team as its members coordinate efforts to accomplish changes in highly complex situations and to sustain those changes while moving toward mutually agreed upon objectives.

From a comprehensive inter-systemic perspective, a third assumption is that interprofessional process is shaped in ways in which neither individual team members nor social entities in the team's larger environment--i.e. organizational or inter-organizational host settings or broader social institutions--are viewed as absolute arbiters of what takes place. Much of the team process and its results are influenced by individuals and groups referred to either as consumers, clients, patients, members, cases, citizens, beneficiaries or victims (depending on the professional perspectives brought to bear on the situation). Thus, there is an interlocking, mutually interdependent relationship between team members, the host setting-larger environment and the people in whose behalf the team functions.

A final assumption is that the interprofessional team approach is as applicable and valuable to teaching and learning the intricacies of interprofessional process in university settings as it is to providing complex human services in practice settings. In both types of endeavors--interprofessional practice and teaching of interprofessional process-there is a synergistic quality in which the outcomes of a well-functioning interprofessional team effort can be considerably greater in scope and value than the cumulative effects of the performance of individual practitioners or educators working separately.

Key Concepts: Process and Interprofessional Process

A conception of a human and social process as ongoing, dynamic and changing manifestation of social interaction--"an identifiable flow of interrelated events moving over time toward same goal or end" (French and Bell, 1978, p. 68)--is in keeping with the just-stated assumptions. "Process refers to the recurrent patterning of changes over time and in a particular direction. This...differentiates process from a series of haphazard, random or chance changes that have no connection or interrelationship." (Hoffstein, 1964, pp. 15-16.)

Stemming from the basic assumption and the above general definition, the interprofessional team process is conceptualized as consisting of purposeful sequences of change-oriented transactions between representatives of two or more professions who possess individual expertise, but who are functionally interdependent in their collaborative pursuit of commonly shared goals.[2] As such, interprofessional process denotes not one process, but a series of multi-level, overlapping and inter-related sub-processes that often take place not only in sequence, but simultaneously. Yet, the sub-processes--often depicted as steps or stages in the larger process--are more suggestive than explanatory of the dynamics involved. They rely largely on rather global categories which are far from precise, and they do not integrate adequately the dimensions of movement. These formulations do have neuritic value, however, in at least implicitly proposing streams of transactions between participants that move toward some end, that are controlled by antecedent phases of the process and they may involve both changes in configuration of participation and in the nature of the actions undertaken.

The interprofessional team process is not thought ordinarily to assume such a neat, consecutively staged pattern of movement as to progress automatically from initial contact and contract stages through problem identification/definition to problem assessment, goal selection, action plan formulation, plan implementation/intervention, goal attainment, evaluation and termination. Instead, such a process "often is improvised . . . in order to deal with contingencies and to attain feasible ends in completing successive tasks." (Siporin, 1975, p. 47.) For example, in a fast-paced crisis situation a team may engage in initial contact, problem identification and assessment, goal setting and some intervention activities in such rapid succession as to make these various conceptually separable behaviors virtually indistinguishable. Also, in other instances, having passed through such stages of a process, a team may re-set goals based on evaluation of prior interventions and then repeat certain previous phases of the process before it advances further.

In brief, a central dynamic of the interprofessional team process is thought to be a form of consensus between team members that reflects neither extreme of perfect unison nor of unbridled conflict. This central dynamic has attributes, instead, of a democratically-oriented flow of transactions which make possible free communication, full participation and a sufficient level of agreement to lead to a concerted series of collective decisions and actions.

Interprofessional Sub-processes

Two of the phasic or process models of teamwork illustrate the considerable differences in ideal type of interprofessional process. The one model depicts a continuum of increasing intensity and complexity of cooperative working relationships that might be expected to evolve in a basically consensual process between interprofessional team members. The continuum from less to more cooperative relationships is one of movement from 1) acquaintanceship to 2) exchange of information, 3) consultation, 4) referrals, 5) planning and coordination, 6) concurrent cooperative service and 7) joint operating responsibility (Kramer, 1956). The second model begins with much the same initial stage as the first model, but then departs to emphasize a different set of sub-processes that does not despite a steady, forward moving progression found in many interprofessional models. Here the evolutionary process of the team is represented as one of 1) becoming acquainted, 2) trial and error, 3) collective indecision, 4) crisis, 5) resolution and then 6) team maintenance with "shared acknowledgement of team tasks...[and] awareness that multiple variables influence group efforts to work together..." (Lowe and Herranen, 1981, p. 4).

Because of the difference in emphasis in the various models of interprofessional team process, as reflected in these two examples, the full range of sub-processes—even when highly condensed—can not be reviewed adequately within the scope of this paper. Instead, in the interests of space some of the sub-processes most frequently encountered in the literature (to be referred to hereafter simply as processes) are collapsed into a half dozen combined headings for brief examination.

1. Achieving a sound professional identification is a process that may occur in large part prior to member entry to a team, but its related processes of defining and re-defining roles also take place, in part, at entry and continue throughout the team participation. Carving out one's niche on a team has been vividly described as follows:

> Phenomenologically speaking, each team member has to find his own unique role, place and function on the team...One enters a team provisionally, with only a core specification of this expected role but a good deal of peripheral fluidity in regard to supplementary, secondary, ad hoc and even novel functions demanded by the situation, in intricate give and take with other team members who are in the same predicament (Pruyser, 1970, p. 7).

How well one can develop his or her role on an interprofessional team depends heavily on one's intellectual preparedness and emotional readiness for team practice. This in turn depends on the quality of one's professional education, experience and maturity if, indeed, "interprofessional collaboration is an extension of professional expertise and no substitute for it" (Allen, et al, 1982, p. 268).

The importance of a solid professional identity, proficiency and confidence upon entry to a team, or soon thereafter, is well illustrated as follows:

> To be challenged about an idea or a professional position can be threatening and can initiate a defensive stance, particularly if one's own professional identity has not been fully achieved. When that identity is secure, the same challenge, question or disagreement is welcomed as a stimulating part of interprofessional dialogue (Thompson, 1983, p. 4).

2. Comprehending contributions of professional colleagues, of team purpose and of effects of the environmental context on the team are additional complicated and interrelated processes for professional participants to deal with early on and throughout the life of a team. An openness to understanding the contributions of other professionals on the team may be impaired by a professional autonomy and specialization learned too well. Professional education with over-emphasis on these qualities may support an impetus to act alone without reference to others (Ducanis and Golin, 1979) and encourage a professional ethnocentrism that can stultify interactive processes of the team. Thus, team members may not only arrive on the team with an over-estimation of the value of their own professional perspectives. They may also compound the problem by finding "it easiest to respond to professional stereotypes rather than to learn what other professionals actually do" (Lowe and Herranen, 1981, p. 7). The not-always-easy-to-achieve answer appears to be for the team to conserve time and find means on its agenda to devote to group processes that foster an "attitude of openness and inquiry toward other disciplines' philosophies and research findings" (Bennett, 1982, p. 313).

Other identifiable influences on team practice go well beyond the professional frames of reference and/or biases of colleagues or one's self. The policies and procedures of the host setting and its bureaucratic administration can hold some of the most compelling and widespread influence on the team purpose and on "the team's operating methods,...even defining the beginning point of a continuing service process... This...affects the opportunities of teams to achieve goals" (Horowitz, 1970, p. 89).

There are impingements on team practice from the larger environment as well. As one illustration, the national and state policies and programs for de-institutionalizing sizeable populations of former psychiatric patients has had a profound "ripple effect" both on the demands for and restricted options placed on interprofessional teams. As a consequence of de-institutionalization mandates, team practice has been dramatically effected in such diverse settings as community hospital emergency rooms, shelters for the homeless and even state departments of corrections (Nason, 1983).

Increasingly, ecologically and systems-oriented members of interprofessional teams have come to realize that the effects of both the proximal and distal environments on day-to-day team functioning require the commitment and skill to distinguish between those constraints that can be addressed internally by the team and those that demand intervention in the external environment. Not only the usual clinical or direct services, but some sort of political action or other environment-directed intervention activity, may need to become the "treatment of choice" in order for the team to be ethically and socially responsive and responsible.

3. Maintaining inter-communication and openly resolving intra-team conflict are additional processes which are implicated in and overlap processes already discussed. Close communication and conflict resolution are especially important where collegiality, democratic decision-making, a spirit of cooperation and shared authority and responsibility are highly respected.

Among problems most frequently encountered and that cry out for sound communication and conflict resolution, are role ambiguity (expectations not clearly defined), role conflict (incompatible expectations) and role overload (inability to meet multiple expectations). As an example of role conflict, physicians experience the dilemma of having been schooled "to take charge even when plagued with uncertainty... Such a stance, essential in many life and death situations, can impede interdisciplinary teamwork, where skills such as consensus/ building, negotiation and equal participation are highly valued" (Mizrahi and Abramson, 1985, pp. 43-44). Thus, a number of authors advocate periodically scheduled process meetings or even the use of outside process consultants to help a team to "clear the air" (Pearson, 1983; Pfeiffer, 1980 and Porter, Lawler and Hackman, 1975).

4. Identifying and assessing problems to be worked, deciding on goals to be set and developing action plans to be implemented are additional processes laden with far-reaching consequences. Clearly, the ways in which "client systems" are identified and assessed will shape all that is to follow. Identification, analysis and assessment of the problem(s) to be confronted are team skills preferably shared by all involved. "Usually individual team members collect and interpret the information their profession regards as within its particular province. Sometimes, of course, there is overlap...and two or more professionals may ask some of the same questions and collect similar data. This is a potential source of conflict..." (Ducanis and Golin, 1979, p. 81). Other potential sources of conflict occur at junctures in the process where team members not only collect data for problem identification and assessment, but also when they attempt to integrate and interpret the various part-assessments of a complex situation.

Whether or not positive or negative ideas and feelings are yielded by decision-making processes engaged in by the team will depend a great deal on how those processes are conducted. A process of "good" decision-making requires "carefully examining the full range of alternatives, weighing the pluses and minuses of each, and collecting new information for use in evaluating the alternatives" (Ducanis and Golin, 1979, p. 94). One of the sets of conditions under which positive decision-making results is least likely to be manifested is when the team falls into in-bred "group think." This pattern occurs particularly if a group cohesiveness resulting from the team being closed off from outside influences is associated with teamwork taking place under a great deal of stress, including the dominating guidance of a team leader who affords little opportunity for dissent (Ducanis and Golin, 1979, p. 94). Under these circumstances, team members may obviously need to return to earlier-mentioned communication building and conflict resolving processes before they can pass through problem identifying and assessing phases, as well as other decision-making processes having to do with goal setting and action planning phases of work together.

5. Negotiating and implementing the action plan and engaging in necessary follow-through are critical processes if the interprofessional process as a whole is not to abort, but is to run its complete course successfully. In complex organizations serving as the locale for most interprofessional teams, negotiated sets of social relationships are necessary because of the multiplicity of purposes and goals that must be met by many different practitioners of varying backgrounds involved in these settings. Another dynamic in a hospital, for example, is that only a minimum of rules can be laid down due to the need for staff to individualize patient treatment and care. A huge area of contingency necessarily lies outside these rules, as elaborated by Ducanis and Golin.

> Interventions may be carried out by individual team members or by the team working together, but generally there is a division of labor, with tasks assigned [or voluntarily assumed] according to professional roles and competencies... There are usually...areas of overlap, where the responsibilities are open to negotiation or to sharing among team members (pp. 101-102).

While negotiation processes are often the process of choice for arriving at some form of consensus, such processes are not engaged in by professional members of the team only. In psychiatric hospitals, for example, "The patients are also engaged in bargaining, in negotiative processes... Most visibly they can be seen bargaining with the nurses and with their psychiatrists, for more extensive privileges...; but they may also seek to affect the course and kind of treatment..." (Strauss, et al., 1973, p. 313).

What is more, some present and previous consumer-patients have recognized, like some professionals, the impacts of the larger environment and "have begun to organize in a wide range of ways so as to affect what they get, and to influence the political process of health programs..." (Rehr, 1983, p. 64). Similar to some of their professional counterparts, these non-professional individuals and groups are developing (sometimes with and other times without professional help) "strategies of least contest." Such strategies begin with collaborative processes, but if those fail they then progress to bargaining-negotiating and thence, if necessary, to contest and/or conflict strategies in efforts to make the larger environment more responsive to their needs.

By what some might term a radical-egalitarian model of the interprofessional team process, "the consumer-patient (and/or family) is as much a chief actor (or team member) as is the professional... Both have parts to play and tasks to perform" (Rehr, 1983, p. 64).[3] And it is a responsibility of the professionals on the team to be aware of and open to the possibilities that such a view holds for thinking new ideas not thought of before or old ideas thought of in new ways as part of the process for implementing and following-through on the action plan in the most efficacious manner.

6. Utilizing feedback and evaluating outcomes are additional processes of great importance to all concerned with a team approach. In fact, "processing" is the term used to designate the activity of gaining perspective and reflecting on the immediate, on-going transactions of the team even while actively engaged in those transactions (Sampson and Marthas, 1981). This continuous, reflective appraisal of just-completed acts—a sort of "social peripheral vision"—endorses the ready give and take of feedback among team participants and facilities on-the-spot corrective action that may need to be taken.

In addition to "processing", more formalized evaluations are undertaken periodically. These evaluations may focus on all major constituent elements of the interprofessional team process functioning as an interdependent whole or they may focus on activities associated with particular sub-aspects of the total process.

In discussion of these six conceptually combined sets of interprofessional team processes--in actuality close to a dozen and a half identifiable processes--the aim is to be suggestive, not exhaustive, of the possibilities. No attention has been given, for instance, to team forming or team convening processes or to terminating of an interprofessional team process.

Some Implications of and for Interprofessional Education

Obviously, there is much for the student of the interprofessional team approach to learn about interprofessional processes. The faculty members teaching interprofessional courses under the coordination of the Commission on Interprofessional Education and Practice at the Ohio State University generally have found three processes of teaching-learning to be considered by students as among the most valuable. These are 1) student-faculty discussion of case studies, 2) student role playing and 3) faculty demonstration of interprofessional teamwork.

In one of the courses, the case of "Maria" is examined by faculty and students as illustrative of an uncoordinated, multi-professional approach (not an interprofessional team approach)[4] in which professionals working with a twelve year old girl have only tacit interprofessional working relationships and little knowledge of each other's efforts (Auerswald, 1968). More fundamentally, none of the professionals in this case example has gained an adequate picture of Maria's total life situation prior to making professional assessments or interventions. Discussion of this case almost invariably leads to a rich interchange of ideas. Questions that arise and usually are hotly debated include: In order to function well together, must members of an interprofessional team (or team-to-be) share a common theoretical framework--e.g. an ecological systems perspective--much like that advocated by the author of this case? Do future team members need to be educationally prepared not so much to use a common framework in order to think alike, but, rather, to act together?

Another feature of the course is for faculty to help students to construct interprofessional team practice episodes and for students then to cast themselves in roles in which they enact their perceptions of practitioners from professions other than their own. These role enactments may frequently project stereotypes held by the role players. Student representatives of those professions depicted in the role play situations then have occasion to appraise the accuracy and inaccuracy of the portrayals. In turn, based on the feedback received from their peers, the role players and their observers share through group discussion the opportunity to sharpen sensitivity, correct misperceptions and gain new insights.

Finally, the demonstrated work of the seven member interprofessional faculty team is a component of the teaching-learning experience apparently highly value by students. In contacts with faculty, students are able to observe and to reflect first-hand on differences in professional frames of reference of academicians and practitioners across the various human service professionals--theology, education, law, nursing, social work, medicine and allied health. Also, students are able, in the process, to compare and contrast those formulations of others with their own emergent practice frameworks. There are multiple opportunities for this sort of learning to take place as a result of presentations by individual faculty or panels of faculty, as well as faculty-guided discussions of small interprofessional groups, plus casual conversations with faculty before r after class and during class breaks. (This variety of bases on which to establish and develop student-faculty interchanges is further facilitated by a student-faculty classroom ratio that is frequently about 7:1 or 8:1.)[5]

Conclusion and Premise

The experience to date in conceptualizing theory and practice of interprofessional team process and in offering interprofessional courses at the Ohio State University appears to be increasingly well received by the academic and practice communities. However, the experience also points to major challenges remaining--put here in the form of questions. By which criteria are decisions to be made as to how comprehensively interprofessional education is to address practice problems requiring a more holistic approach than that provided by any one human service profession? What of the feasibility for enabling students to develop the interdependent "process skills"--rational and socio-emotional--to aid teams in fostering both task achievement and cohesiveness necessary for goal accomplishment? How are professionals of the future to be educationally prepared to practice within interprofessional contexts to serve the essentially complementary functions of helping people to deal with private troubles and of helping larger social units to deal with related public issues? What are the gains and losses to be accrued by conceiving of and acting toward client systems of interprofessional teams as members of those teams?

The above challenging and question-focused conclusion is based on the following premise of a hoped-for future. In the years to come, organizing theoretically the above sorts of questions (and others such as those posed in the preceding section), and then searching scientifically for empirically grounded answers, will help to determine in large measure not only the scope, shape and strength of interprofessional team process but, also, the kinds of educational preparation necessary for effective teamwork to take place in practice.[6]

ENDNOTES

1. While the focus there is necessarily limited to interprofessional teamwork, we are reminded that this is but one mechanism of a larger set of interprofessional collaboration processes which includes "communication and coordination by means of consultation, unified record keeping, written data feedback, informal sharing of information and ideas, formal staffings..." (Mailick and Ashley, 1981, p. 132).

2. This notion of interprofessional team process bears close correspondence to conceptualizations in the literature. See, for example, Mase, 1975, p. 31; and Hooyman, 1984, p. 527; perhaps the most comprehensive review of concepts of teamwork appears in Kane, 1975, pp. 3-5.

3. A recent analysis of professional literature in various fields of practice has revealed how families are viewed so differently by professionals, depending on the field. For example, "Professionals writing in the field of mental retardation tend to view the family as effective team members... The literature dealing with mental illness is quite different. The dominant view is of families as part of the etiology of the illness. Furthermore, when professional treatment does not produce the expected results, family members are seen as the major obstruction... Given this, it is easier to understand why little emphasis is given to family members as part of the care giving team" (Moroney, 1986, 130-140).

4. For teaching and practice purposes, the clear conceptual and terminological distinction between multidisciplinary (or multi-professional) and interdisciplinary (or interprofessional) approaches needs to be drawn. The former approach is characterized as a pattern of "members of diverse disciplines... more or less informally interacting with—or tolerating—each other"' the latter is a pattern of "different disciplines meaningfully involved in formal team arrangements that maximize opportunities for educational interchange and service delivery." (Bloom and Para, 1976, p. 676).

5. The successes that faculty teams have achieved in providing these sorts of learning experiences have been due to several facilitating resources made possible over the twelve year experience of the Commission on Interprofessional Education and Practice, The Ohio State University. Key factors have been 1) strong backing of the University and other cooperating institutions, including statewide professional associations, 2) committed and clearly very capable Commission leadership, 3) exceptionally high quality staff work, and 4) a sense of mutual ownership of courses by participating academic units. For a review of the Commission's full range of programs and its underlying philosophy, as well as a history of its first decade, see Cunningham, Spencer and Battison, 1982, pp. 1-7.

6. Ducanis and Golin write that to date the team approach "has generated more rhetoric than research and an adequate theory of teams has yet to be formulated" (1979, I). Moreover, much of the literature on teamwork is anecdotal or experiential, borrows freely from the professions and social sciences and does so with little regard for congruence (1979, ix).

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CONCEPTUAL FRAMEWORK FOR PLANNING INTERPROFESSIONAL EDUCATION: IS THE KEY CONTENT OR PROCESS?

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The Commission on Interprofessional Education and Practice offers five distinct courses for academic credit:

Changing Societal Values and the Professions
Interprofessional Care
    (development of interprofessional treatment strategies)
Interprofessional Seminar in Clinical Settings
    (experience in interprofessional teamwork)
Ethical Issues Common to the Helping Professions
Interprofessional Public Policy Analysis

One additional courses is being developed: Interprofessional Approaches to the Care of Chemically Dependent Families. At least one course is offered during each of the three regular academic quarters at The Ohio State University. The Commission also sponsors Medical Ethics Conferences in collaboration with the College of Medicine. The Commission's activities beyond these courses are considerable, but will not be discussed in this presentation.

The Commission draws graduate professional students and faculty from seven academic areas: the colleges of Education, Law, Medicine, Nursing, Social Work, the School of Allied Medical Professions, and the Columbus Cluster of Theological Schools made up of Methodist Theological School in Ohio, Pontifical College Josephinum, and Trinity Lutheran Seminary. Many of the students participate in the Commission courses on an elective basis. Although the Commission courses are offered during regular Ohio State quarters, three participating units-- the colleges of Law and Medicine, and the Theological Schools are on differing semester schedules. The variations of schedule among the colleges create special curriculum planning challenges for Commission courses.

As part of its overall goals, the Commission has attempted to be responsive to some of the criticisms of professional education that Schein noted in the Carnegie Commission Report on Professional Education. Schein's criticisms included:

> The professions are so specialized that they have become unresponsive to certain classes of social problems that require an interdisciplinary or interprofessional point of view.
>
> Professionals have become unresponsive to the needs of many classes of ultimate clients or users of services, working instead for the organizations that employ them.
> Professional education is almost totally geared to producing autonomous specialists and provides neither training nor experience in how to work

> as a member of a team, how to collaborate with clients in identifying needs and possible solutions, and how to collaborate with other professionals on complex projects.
>
> Professional education provides no training for those graduates who wish to work as members of and become members of intra- or inter-professional projects teams working on complex problems.
>
> Professional education generally under utilizes the applied behavioral sciences, especially in helping professions to increase their self-insight, their ability to diagnose and manage client relationships and complex social problems, their ability to sort out the ethical and value issues inherent in their professional role, and their ability to continue to learn throughout their career (Schein, 1972, pp. 59-60).
>
> The Commission has adopted four major educational objectives (1985):
>
> 1. To address interprofessionally a range of ethical issues arising out of technological change;
>
> 2. To identify changing societal values and prepare professional students for their role in responding to and shaping them;
>
> 3. To teach concepts and methods of interprofessional teamwork in treating the interrelated problems of the whole person at the case level;
>
> 4. To improve public policy through interprofessional analysis of public policy issues.

The relationship between these Commission goals and the current and projected course offerings is easily seen.

A recent evaluation of the Commission's overall efforts, however, suggested that the apparent relationship between overall mission and the courses might be further explored. The evaluator posed a number of questions about the courses and their interrelationship, that is, the coherence of the courses as a curriculum. The questions included the following:

> How do courses interrelate and how should they interrelate?
> How well does the present configuration of courses serve the Commission's educational objectives?
> Do clinical education concepts dominate the curriculum?
> Is there a problem of focus in courses with complex subject matter?
> Is enough being done about the exposure and reduction of interprofessional stereotypes?

The valuative questions provide opportunity to examine the Commission's courses from several perspectives, including issues of content and issues of process. The elective nature of the courses and the varying academic schedules of the participating units present immediate problems in thinking of the curriculum as an articulating set of courses. That is, a student may elect to enroll in only one course, or may enroll in several. For students who wish to enroll in more than one course, no particular sequence is prescribed. Nor are there prerequisite courses, although students are usually expected to be enrolled in one of the participating academic units. With this brief description of the elective, non-sequential character of the Commission's course offerings, the differences between the usual prescribed curriculum for professional preparation in any of the participating units and the Commission's curriculum become apparent. We will examine both content and process approaches to interprofessional course work. We will review objectives in both areas, that is, those which address traditional didactic sorts of information and those which can be termed process because they have to do with hands on or simulated experiences. These objectives will be drawn from recent course syllabi.

A Content Approach

Most of the Commission courses conceivably could be taught as didactic courses presenting relatively bounded content. In order to meet the objectives of the Commission and of individual courses, the following content areas can be identified:

1. social, psychological, cultural factors that affect clinical practice;
2. theories of team work or team collaboration;
3. theories of group process and the effects of leadership, group norms, individual values;
4. sociological concepts related to professions such as autonomy, role definition, status, values;
5. the rules of professions--that is formal and informal codes of professional conduct especially as rules apply to clients or patients such as privacy, informed consent, competency;
6. systems for ethical decision making;
7. strategies of public policy development;
8. history and implications of specific techniques of policy analysis and decision making.

This list is not intended to be exhaustive, but does illustrate the possibility of expecting students to acquire a theory or knowledge based approach to interprofessional practice.

A Process Approach

The emphasis on interprofessional communication and on exposing and reducing interprofessional stereotypes has been such a strong interest of Commission faculty teams that the course offerings are replete with process objectives. The stated learning objectives, the instructional methods, and the course evaluation materials all reflect a strong emphasis on a process approach as the organizing framework for Commission courses. Examples of process objectives taken from course syllabi include the following:

1. recognize, appreciate, and use competencies of other professionals;
2. appreciation of group process;
3. awareness of attitudes and expectations of other professions;
4. discover attitudes and values that underlie each profession;
5. use team process techniques;
6. participate in a team to plan patient care;
7. form a team around a client problem;
8. observe and analyze how a care team functions;

9. develop insights into one's own profession;
10. experience ways professionals can work together to influence policy decisions;
11. analyze conflicting values between and among professionals, clients, society, and institutions;

Several instructional methods are employed to achieve the process objectives: the ethical issues and the societal values courses have primarily used a 'read and discuss' model with applications made to case studies. The syllabus of the policy analysis course also relies on a 'read and discuss' model. The interprofessional care course uses a service delivery model in which faculty and students work in interprofessional teams to resolve simulated client problems. The clinical practicum uses active interprofessional clinical participation in local clinics followed by discussion of observations of interprofessional practices with the course faculty. Another paper delivered at this conference by the authors will provide information about student responses and their perceptions of changes in their own behaviors and understandings of interprofessional team participation.

A Framework for Interprofessional Education

We have outlined a framework (Figure 1) for exploring the purposes of the interprofessional courses. The framework describes the process and content approaches that are or could be used to plan individual courses. The same framework could be used to identify interrelated interprofessional courses. The purpose statements in the framework are modifications of statements about teaching applied ethics and interprofessional practice found in Callahan and Bok (1980, pp. 73-74), Hastings Center Reports (1980, pp. 47-55), Kane (1975), and the interprofessional course syllabi used at Ohio State University during the academic year 1985-1986.

In the framework, we have tried to represent the possibilities of both process and content approaches through which purposes of interprofessional education might be achieved. While content approaches are important in the interprofessional courses, faculty have placed a greater emphasis on process issues. The educational purposes of the interprofessional courses are so strongly driven by a concern that graduate professional students learn to function as part of an interprofessional team, that it is difficult to imagine other approaches.

Despite the emphasis on process strategies within the courses, recent student evaluations suggest that direct work with clients in clinical settings would lead to realistic solutions. Faculty developed cases can lead to ambiguity in group problem solving since there are no actual results in a client's life to test the appropriateness of the decisions reached by the student group. The Commission has acknowledged this potential by offering students the opportunity to enroll in the Interprofessional Seminar in Clinical Practice.

A CONCEPTUAL FRAMEWORK FOR INTERPROFESSIONAL EDUCATION

PURPOSES	PROCESS APPROACH	CONTENT APPROACH
stimulating the moral imagination	actual or simulated cases that pose dilemmas	ethical dilemmas bio-ethical issues
develop skills in recognition and analysis of moral issues	applied ethics approaches to discuss, analyze actual or simulated cases	formal ethics approaches applied ethics models
elicit a sense of moral obligation and personal responsibility		
sense of interdependence among professionals	collaboration, experience in interprofessional decision making about real or simulated cases with	
ability to communicate with other professionals	emphasis on oral communication	theories of communication
	use of group process techniques	
recognition of values of own and other professions		sociology of professions
tolerating and resisting disagreement and ambiguity	exploration of conflict	
ability to engage in decision making as part of a team	developing care plans observing interprofessional teams in clinical settings	change theories, process consultation techniques
understanding of cultural, social, political values that influence decision making		sociology, psychology, political science

(Figure 1)

(Figure 1, Continued)

PURPOSES	PROCESS APPROACH	CONTENT APPROACH
knowledge of group dynamics	experience in interprofessional groups to plan client care, engage in decision making, observe and analyze process	theories and research in group process
knowledge of effects of public policy	direct observation of effects such as deinstitutionalization, education for all handicapped children	policy analysis ability to analyze and influence public policy

Summary

Education that develops skills in interprofessional collaboration is acknowledged as an important goal of professional education. The Health Policy Agenda for the American People (HPA), a comprehensive framework being developed by the American Medical Association, notes that students in health professions education should learn to work effectively with health professionals in other disciplines, stating that "interdisciplinary learning experiences are an important means to this end" (Balfe and others, 1985, p. 2444). This report may have a lasting effect on our nation's health policies and a resultant effect on the education of health professionals. The practical decision of the faculty teams who teach in the interprofessional curriculum facilitated by the Commission on Interprofessional Education and Practice at The Ohio State University has been to emphasize process as an important priority in interprofessional education.

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INTRODUCTION

TEACHING MODELS FOR INTERPROFESSIONAL LEARNING EXPERIENCES

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Developing interdisciplinary teamwork is a complex process. It requires professionals with a high level of knowledge and skills in diverse professions, knowledge of how to coordinate those skills to pursue collaborative treatment plans, a supportive institutional environment, and the ability to handle complex interpersonal interactions in a group setting. Not surprisingly, therefore, much of the literature on interdisciplinary teams has emphasized training models. This set of papers fits well into that tradition, offering suggestions regarding the process of developing interprofessional training and innovative content for such training. In particular, these papers provide information on how to generate training programs in academic institutions where interdisciplinary training has not previously been a part of the curriculum.

The first paper, "A teaching model for an interdisciplinary health care team course", provides a prototype for collaborative course development. It is authored by an interdisciplinary team, who in order to develop this course, successfully confronted many challenges typical of interprofessional effort, including institutional pressures and difficulties defining roles.

The third paper, "Team Education: What is needed", is a companion piece to the first paper. Just as in the former, it emphasizes the team process which occurs in developing a course on interdisciplinary team work. The paper points to the importance of learning to welcome the challenges of this team process and exploit it in order to define the most important course content. In addition, the latter paper points out special issues involved in teaching interdisciplinary concepts to undergraduates, who are just beginning to develop a professional identity, whereas the first paper emphasizes graduate training.

The second paper of this set, "A course on Third World Health for Allied Health Students", provides a contrast. This paper contrasts interdisciplinary health care as it exists in Western nations with the health care needs and services available in Third World countries. Specifically, a course is described which was developed for graduate students from many professional disciplines. These students are offered the challenge of considering how to adapt interdisciplinary concepts for under-served nations with minimal resources (financial and otherwise).

In summary, these papers provide useful commentary on four interconnected, important issues:

1. How can groups of professionals from different disciplines function as teams to plan interdisciplinary courses?
2. What should the content of such courses be?
3. What learning modalities will be most effective?
4. What can we learn about interdisciplinary education by contrasting our health care system with the health care needs and resources of Third World countries?

A TEACHING MODEL FOR AN INTERDISCIPLINARY HEALTH CARE TEAM COURSE

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Introduction

This paper will discuss a continuum of interdisciplinary practice which evolved as a teaching tool for an undergraduate course, the Interdisciplinary Health Care Team, offered within the College of Health and Human Services at Eastern Michigan University. Graduates from all departments within the college were increasingly entering jobs which required them to work as team members. During the past few years there has been a phenomenal growth in the use of teams for health care purposes. The utilization of health care teams, regardless of the form they take, assure availability and continuity of care centering on the overall health of the individual patient in his particular environment and community, (Hepner and Hepner, 1973). The emergence of the health team concept after World War II paralleled the development of increased social awareness and the expectation of health care for all (Torrens, 1978). The physician and nurse were no longer in total control of health care as allied health professionals found themselves in new and challenging roles.

As health care has become more complex, so has the relationship between health care professionals. Health care is most frequently delivered in an interdisciplinary context. Health care service providers within this context represent professions which have differing knowledge, skills, values, and purpose. The difficulties these differences represent are illustrated by the emphasis on role definition, role negotiation, and role clarification in the literature on interdisciplinary practice, (Balassone, 1981; Lister, 1980; McKenna, 1981; Schlesinger, 1985).

Given the pervasiveness of the interdisciplinary health care context, educating for interdisciplinary practice seems imperative to ensure effective collaborative practice. A typical curriculum for providing this education includes the following content areas: team models; roles of different health care professionals; communication across professional boundaries; and group process (Harris, et al, 1978). A holistic perspective emphasizing the patient/client as a person, not a given health problem, is generally an organizing principle for these curriculums. Commonly, the requisites for interdisciplinary practice are commitment to values and ethics of one's own profession, recognition of expertise of colleagues and others, and recognition of the interdependency of practice (Falck, 1977). The key to implementing successful interdisciplinary health care teams is in educating the health professional to work as a team member with an understanding of and sensitivity to the team as a small group in addition to respecting the technical expertise of others on the team. In designing the curriculum for the health care team it is necessary for students to learn about the roles of other health professionals, develop an awareness of the resources that other health professionals can provide to a patient, and coordinate their care of the patient with that of other involved professionals. In the past, these interdisciplinary educational experiences have taken a variety of forms, many reflecting the need to work within the limitations of the "separationist" structure that exists in most health education settings. Under this structure "interdisciplinary" education occurs largely by chance in clinical settings where the needs of the patient or the situation compels traditionally orientated professionals to work together (Bufford, 1978). With the increased need for interdisciplinary health care teams many institutions of higher learning have developed didactic courses for interdisciplinary groups of students. The goals of these courses have usually been twofold: 1) to provide students with some information about one another's professional training and skills and 2) to provide a forum for interdisciplinary discussion of general issues in health care important to all health professions. In most instances no actual collaboration is performed by the students. The interdisciplinary exposure is primarily intended in increase the future professionals' ability and willingness to collaborate with one another in the care of patients (Pellegrino, 1972).

Conceptual Framework

Interdisciplinary practice not only has many names -- multidisciplinary, multiprofessional, trans-disciplinary, trans-professional, interdisciplinary, and interprofessional -- but it takes many forms (see Figure 1). These forms lie along a continuum of professional autonomy. A choice between them can be made on the basis of patient/client health care issues and their ecologic contexts, on the basis of needed professional knowledge and skill, on the interpersonal characteristics of health care professionals as they interact with a given profession's values, and on the consequences of potential treatment plans. The research on utilization of interdisciplinary health care teams indicates their greatest efficacy in dealing with health care situations which are chronic and complex and/or which involve patients/clients who have difficulty in dealing with the health care system (i.e., low income individuals) (Halstead, 1976; Beloff and Korper, 1972).

FIGURE 1: A CONTINUUM OF INTERDISCIPLINARY PRACTICE

Professional Autonomy Decreases - - - - - - - ->

Shared Expertise Increases - - - - - - - - - ->

Parallel Practice

Consultation

Multidisciplinary practice

Collaboration

Coordination

Interdisciplinary practice

Choosing Along the Continuum:

Chronicity and complexity of health care situations
increases - - - - - ->
Ability client to access health care system
decreases - - - - - ->

Parallel practice occurs in every health care setting which contains more than one professional. It is characterized by clear role definitions with well specified tasks. Everyone knows his/her job. Lines of authority are clear in what is usually, but not always, a hierarchical structure. Communication channels are in place in ensure coordination. Patient/client charts are examples of a formal communication device in this type of interdisciplinary practice. Professional autonomy is at its height, shared expertise is at its nadir.

Collaboration occurs when diverse professionals share their information, assessments, and treatment plans. This is usually done on a case-by-case basis and can occur quite informally over coffee or in a more routinized case staffing. Again professional autonomy is quite high but the potential for shared expertise across professional boundaries has risen.

Consultation involves the giving of expert advice from one professional to another. Where skillfully used, it can greatly enhance the bio-psycho-social knowledge and understanding of the consulted. Consultation frequently takes place between professionals in a multidisciplinary and/or interdisciplinary context as well as on a one-on-one basis.

Coordination adds a management function to the activities of collaboration and consultation between diverse professionals. A case coordinator (or case manager in some settings) carries primary responsibility for ensuring relevant communications and connections between professionals and between these professionals and the client/patient and his/her family and community. A coordinator may also carry prioritizing and/or ordering functions for activities to be carried out. In this model of interdisciplinary practice, coordination, consultation, and collaboration can take place between professionals on a face-to-face basis or through formal/informal communication channels.

Although the terms interdisciplinary team and multidisciplinary team frequently are used synonymously, they, in fact, describe two quite different phenomena. Bair (1983) describes the multidisciplinary team as "one or two individuals acting as core communication intermediaries in directing and planning the overall activities of ancillary members who may or may not meet with other team members." Multidisciplinary team members are managed by a leader, usually not a physician. Specific treatment units such as stroke units and psychiatric units, provide the organizational locus for the team. The multidisciplinary team is a highly articulated and formalized outgrowth of coordinated collaborative practice when the team does not meet face-to-face. Those multidisciplinary teams which do meet face-to-face begin to resemble the interdisciplinary team. It is only as groups of professionals meet regularly in each other's presence around specific goals that the interdisciplinary team is possible. The group process generated by regular, goal directed, face-to-face meetings leads to the development of a team. Common goals, cooperative relationships, and coordinated activities are ideally the hallmarks of all collaborative professional work. It is when professionals meet together to pursue these activities that a health care system which can be greater than the sum of its professionals is created. We call that health care system the interdisciplinary health care team. This type of collaborative practice maximizes shared expertise and minimizes professional autonomy. This minimizing of professional autonomy produces a certain, continuous level of tension on the interdisciplinary health care team.

If members diminish the uniqueness of their professional base of knowledge, values and skills, their contribution to the goals of the team -- effective, holistic health care -- are diminished. If, on the other hand, members maintain professional differences too strongly, the internal functioning of the team can be impaired. Other investigators have noted the mechanisms which professionals can use to emphasize similarities without diluting uniqueness. These mechanisms include common orientation to the client/patient as the primary unit of attention, similarities in treatment modalities, common bodies of knowledge, shared language, and shared status and position, (Darling and Ogg, 1984). The major difference between professions is frequently the professional value system of each. This is the difference, in conjunction with differing sets of expert knowledge, which makes each contributor to the team most valuable. Territorial disputes generally arise around who does what, not who knows what, and how choices based on that knowledge are valued.

Educating for interdisciplinary practice requires professionals, both as students and in practice, to begin to understand the continuum of collaborative practice with the demands on professional autonomy and shared expertise required in different health care settings. In addition, students need to be aware of the requirements of the health care settings and the matches which can be made between types of professional collaboration and health care issues to be dealt with through collaboration.

The Interdisciplinary Health Care Team Course

The initiative for the development of the course came from the Dean of the College who was interested in developing interdisciplinary activities. The emphasis was on the interdisciplinary team as a model of collaborative practice not only as a teaching content area and as a team to model the content for students enrolled in the course, but also as a model for collaborative efforts of other kinds across the college. The four faculty members that comprised the team that was to design and teach the course were self-identified from four different departments within the College. They represented dietetics, occupational therapy, social work, and nursing. Each faculty person had had previous interdisciplinary health care team experience in a variety of settings, ranging from community mental health agencies, public schools, and hospice to acute care facilities. They had not previously worked together. At the initial meeting to begin course planning, the faculty discovered a shared enthusiasm and a strong commitment to the interdisciplinary process. Various interdisciplinary team experiences were discussed. While all had had team-oriented, client-focused practice, members had not previously identified common areas of knowledge which could come from these experiences to be incorporated into an academic course. Similarities and differences involved in preparing and presenting a course including approaches to course organization, expectations of students, preferred teaching styles, and methods of evaluating students quickly appeared. Grading practices not only varied from faculty member to faculty member but also from professional curriculum to professional curriculum. Just as health care teams in practice need time to come to consensus regarding team issues, the faculty team needed time to develop a common, consistent approach to the course. This was done in pre-course planning and continued in weekly planning sessions throughout the semester.

The decision was made to offer a two credit hour course which would meet once a week over the semester. The topics to be addressed were the purpose and nature of the interdisciplinary health care team, group process in the team, tasks of the team, participation (group composition) on the team, and ethical considerations of team practice. The objectives for the course specified that students would be able to:

1. explain the structure and function of the interdisciplinary health care team in various health care settings;

2. explain the purposes of the interdisciplinary health care team in various health care settings;

3. explain the purposes and roles of various health disciplines on the interdisciplinary health care team;

4. understand the dynamics of small group process as these apply to the interdisciplinary health care team;

5. describe alternative leadership styles and decision-making processes and the situations which are appropriate to each;

6. participate in mutual decision making about client situations as a member of an interdisciplinary health care team, applying professional knowledge, values, and skills to a case situation;

7. demonstrate an understanding of the different values, ethics, and methods of practice of various health care professions;

8. as members of an interdisciplinary health care team, be effective advocates for clients.

It was decided that all faculty would be present at each of the class meetings, not only for the purpose of team teaching, but to serve as a model of team interaction and process. The decision was made that class format would be one of presentation of information followed by informal discussion with a variety of learning activities to illustrate salient points. Faculty alternated as primary instructors for each session. A course pack of articles from a variety of professional journals were compiled and served as the text.

The student group registering to take the course was heterogeneous, representing nursing, social work, dietetics, occupational therapy, and health administration. All were in their junior or senior year with the exception of two students who had returned to the university for additional course work. During the course, students became aware of many of the aspects of cross-professional collaboration as they discovered similarities and differences in orientation to the client, treatment plans and their implementation, resource accessibility, language, status, and position. From the very first day, faculty emphasized the importance of holistic treatment which considered all aspects of the person, family, and environment as a similarity which underlay all the health care professions. Intervention was viewed as a problem solving process by all professions, although the language used to describe the process varied. Finally, the role overlaps between professions were identified. As the semester progressed, students became aware of some of the differences between the health care professions represented in the course. For some team members, treatment priorities were aimed at client problems, for other they were aimed at client strengths. Some professions had more power and status on the team, depending on the setting and on the client. The ethical codes of the professions also reflected different philosophies about the role of the client in treatment. For example, the ethical code of the social workers emphasized the importance of confidentiality between social worker and client as a priority which could interfere with the sharing of information with other team members. Social workers also believed in the importance of client self-determination in all aspects of treatment, seeing clients as individuals with strengths to be engaged in treatment. On the other hand, the ethical code of the nursing profession emphasized amelioration of problems interfering with a client's health.

Throughout the course, individual professional roles were evident in student interactions and responses to class activities. For example, nursing students sought more comprehensive and detailed information about the status of a client in case studies and role play activities than other students. The nursing faculty member explained that in acute care settings, the nurse is responsible for the coordination of twenty-four hour care of the patient whereas other team members had less frequent contact and addressed specific aspects of client care. Students in their expectations of the course reflected the curriculum structures of their departments within the college with regard to degree of structure, types of testing, and grading.

As students described rationales for involvement of team members on treatment teams located in a community program for the homeless, they were able to hear the perceptions of fellow students about each profession. Not only were there distorted understandings among students about what other professionals did in their work, but students also tended to rather narrowly describe the role of their own profession. On the other hand, as students began to struggle with team building they discovered a common body of knowledge in communication and human relationships which they were able to apply to their own profession's core knowledge in learning activities dealing with values, conflict management, and decision making.

The emphasis of the course, as noted in the topical outline, was on the basic concepts of team functioning reflected not only in professional literature but also in research literature dealing with small group process and structure. Students read about teams, role played teams, observed health care teams, created teams on paper but did not experience themselves as a team or even a classroom group. Students sat together by discipline and consulted with each other by discipline. Attitudes towards assigned work, testing methods, and grading were expressed by students similarly within discipline. The course evaluations indicated that students from differing disciplines had very different experiences within the class and quite different levels of satisfaction.

Students are socialized into a strong professional identity as one part of their professional education. As they move towards graduation, the need to move more firmly into their respective professional roles becomes more urgent. Attention is more likely to be focused on maintaining newly emerging professional role boundaries than on blurring those boundaries in collaborative efforts across discipline lines. Conflict between professionals on the interdisciplinary health care team may reinforce professional boundaries for each of the members. In addition, Brill (1976) points out that the students in human services predominantly come from the middle class which is strongly oriented to success and status as measured in individual achievement. This orientation to individual achievement is reinforced by professional education which stresses professional autonomy and independence vis-a-vis other professions rather than stressing interdependency and cross-discipline collaboration. (Ducanis and Golin, 1979).

Implications

Presenting the concept of the health care team as a continuum from parallel practice to the cohesive interdisciplinary team has implications for students, academic units, and health care settings. The concepts which underlie the continuum of interdisciplinary practice prepare students to work in today's complex health care settings with an understanding of the diverse nature of professional practice in those settings. Educators of students in any professional curricula have always had the responsibility for preparing students for their future work environments. The education of health professionals is further complicated by the changing nature of the health care delivery system which makes demands for new definitions of professional roles, interpersonal relationships between professionals, and which frequently takes place in non-traditional physical environments.

Today's graduates will take jobs as direct care clinicians and therapists, as case managers, health educators, and consultants. They will work in schools, health care agencies, residential treatment facilities, community support programs, extended care facilities, nursing homes, and hospitals. For both procedural and economic reasons, the interdisciplinary team which involves regular, face-to-face meetings, group decision-making, and problem-solving is not being used in all health care settings. However, cross disciplinary practice exists in its many other forms in most health care settings. An understanding of these diverse forms of interdisciplinary practice enables students to make clear career decisions about the type of setting and team best suited to their interpersonal style and professional needs. Some students may prefer the role of an independent health practitioner with no cross professional relationships. These beginning professionals may feel a need to identify and develop their unique professional role whereas other beginning professionals may prefer cohesive collaborative participation with other health care team members. Different interpersonal and group process skills are required at either end of the continuum. As a result of a course on the interdisciplinary health care team, students will have a clearer idea of their own strengths and weaknesses as they become entry-level professionals and members of interdisciplinary teams, a form of practice requiring a complex set of interpersonal skills.

Today's students who are preparing for careers in health care settings are concerned with understanding their own professions and working to achieve a professional identity as they move towards graduation. To focus course content on interdisciplinary team experiences which require the most group process development and skills may be incongruent with the needs of students at this stage in their professional socialization. If the course were presented as a continuum of interdisciplinary experiences, beginning with those forms which require less cohesion, students may feel more comfortable with the intensity of the group experience.

The creation of an interdisciplinary course has had implications for the College of Health and Human Services which hosted the course as well as for those students who completed the course. Despite the support of the Dean, strong departmental support has not been forthcoming. This could pose future problems in recruiting faculty to teach the course. When the college was created ten years ago, the unique curriculum of each program was emphasized over interdisciplinary efforts. Based on requirements of professional accreditation and review, each curriculum has so many required courses producing highly structured schedules for students; consequently, there is little time for elective courses. Each program calculates a full-time faculty load differently. Although the college is currently exploring common methods for determining faculty teaching loads across all programs, department administrators, feeling the economic pressure of the University, are hesitant to release faculty to teach interdisciplinary courses. The faculty and administrators of the college must weigh the advantages and disadvantages of interdisciplinary courses and decide whether they wish to make a commitment to interdisciplinary educational efforts.

In a University setting, a danger exists in emphasizing disciplinary over interdisciplinary efforts. Billy Frye (1986), in his former role as a Academic Provost of the University of Michigan, stated that the university needs the intellectual stimulation of imaginative and creative interdisciplinary work which can provide synthesis and integration in unproven fields. He expressed his concern about an opposing trend towards increasing "disciplinization" in the universities across the country. He saw the dominance of disciplines in the organization and administration of universities as creating a rigidity which results in conformity, conservatism, lack of imagination, and resistance to change. He regarded these problems as the most serious facing the nation's universities. He went on to say that the dominance of disciplines seen at the levels of the department, professional school, national societies of disciplines, and supporting professional organizations is inhibiting cross-disciplinary endeavors, and synthetic, integrative scholarly work.

The team feels that within the college there can be benefits from the process of working together to explore common interests in scholarly activity and research, develop theory, pose testable hypotheses, and conduct quality research. The study of interesting and difficult problems in health care can be facilitated by sharing research and methodology. The teaching team has currently identified common interests in the interdisciplinary study of ethics and legal issues. The college must consider the potential improvement of the quality of health care and the enrichment of each profession which can come from interdisciplinary efforts.

The education of students using a continuum of collaborative styles based on group process has implications beyond the college for the health care settings who employ the students as entry-level professionals. Costs and implementation of management concepts are causing health care facilities to reorganize the structure of their programs (Bair, 1983). With the new organizational structure, settings are selecting a variety of methods of service delivery some of which include teams. Students who enter practice with the knowledge and skills to work together using several different styles will be in a position to provide leadership for the creation of appropriate interdisciplinary practice to meet the needs of clients, the setting, and the broader health care system. The new practitioner will understand that no one form of collaborative practice exists across all settings. This practitioner will be able to develop and use the many forms of interdisciplinary practice as they suit the requirements of diverse health care service delivery situations.

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A COURSE ON THIRD WORLD AND HEALTH FOR ALLIED HEALTH STUDENTS

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In the Fall 1985, a course on Third World and Medicine was offered in the College of Allied Health Professions as part of the interdisciplinary colloquium. Even though several colloquium courses were available, this course was oversubscribed, and the students were enthusiastic and interested in the course material.

A pretest, consisting of a blank world map and a series of questions regarding definitions of medicine, third world, etc., was given in the first class period. Only two students correctly named five third world countries, and several students could not name a single country. Of those who could name some countries, most could not locate them on the world map. Students performed better on the definition section of the pretest, where most of them gave an acceptable definition of medicine and health. Few of the definitions of third world were acceptable.

Students were given a packet of materials with comparisons of statistics from "first, second and third world" countries, especially as related to health matters. The course focused on distribution of world resources, world politics, leadership, economics, history and geography as related to public health.

Classes were designed to focus on similarities and differences of third world countries on different continents. Teaching methods varied somewhat, but the pattern was to have a guest speaker who was a native of each country being studied. The speakers were asked to present the history, location, geography, highlights of the culture, economy, health problems and native cures of their country. This information, along with assigned reading, was the basis for discussion of the interrelatedness of the country's problems. After several countries had been studied, a "poverty meal" was served one evening at the home of the instructor. Three guest speakers helped prepare a typical peasant's meal from their country. While eating, students used no furniture, tableware or silverware. They sat or squatted on the ground around the common plate of food, and used the native bread or their fingers to eat the food. All meals were prepared from rice, vegetables and some form of bread. All meals were scanty, and students ate little food. Each speaker then explained the contents of the meal, the caloric intake and the customs of eating in that country. Students later commented that this experience gave them great insight into the potential health problems resulting from poor dietary intake and insufficient food, as well as in eating from the common dish.

Most of the speakers illustrated their presentations with slides, which made it easier to visualize the geography, the culture and the dress of the country being studied. Some speakers brought artifacts of clothing, crafts, etc. to augment their presentations. The native healing practices, such as use of berries, roots, leaves, dances, incantations, and symbolic gestures were common to all cultures. The students came to the realization that many of the more sophisticated medications used today have their origins in native medicine.

The most frequently mentioned problem in all third world countries was lack of public health measures, such as sanitation and sources of safe water. All other attempts fail miserably without those primary necessities. Having grown up with public health measures, students assumed that the rest of the world live as they do.

The causes of poverty, such as economic difficulties, due to lack of incentives, and mineral or financial resources, came into sharp focus in this course. Students suddenly became more conscious of their advantages and for the remainder of the semester were less prone to complain.

Students engaged in heated debates over issues raised in this course, e.g., population control, distribution of world resources, sense of responsibility for other human beings, etc.

Students were required to write a conclusion paper in which they discussed similarities and differences of health problems in these countries and their concrete suggestions for changes. The World Health Organization (WHO) slogan "Health for all by the year 2000" was to be analyzed in view of concepts learned in this course.

The post tests showed that all students could now locate third world countries, and that they could satisfactorily define the terms given on the pretest. Overall the students rated this class as one of the best and most provocative they had ever taken. They felt they had learned a great deal about other countries and had developed a sense of awareness and responsibility for helping others. In fact the course was so stimulating that over half the students volunteered to work for a short period in a third world country, and several indicated they would probably work there for long periods of time. Seven students from this group worked for one month in the Blackfeet Indian Community Hospital on the reservation in Browning, Montana in lieu of an aborted plan to work in Haiti (after collapse of the government).

A course similar to this one is recommended for other health professions colleges in that it raises consciousness, helps students work as a team on common problems and realize their potential for helping others who have far less of the world's goods than they do. Finally, this course helped students realize that there are many forms of healing, of which modern technological medicine and health care are very recent developments. It was realized that many of our health care practices have originated from native healing practices.

TEAM EDUCATION: WHAT IS NEEDED?

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I would like to introduce you to the University of North Dakota's course entitled, "Team Planning in the Human Services." I would like to explain to you our planning process for this course, how we became committed to it, what the faculty and students have identified as effective learning activities, and how we would like to continue developing our course. Perhaps via this information we can all begin looking at essential elements for instruction in the area of teamwork theory and issues.

This course's development began in 1984 by an Occupational Therapy instructor at UND, Dory Marken, who perceived the need for students to become involved in interdisciplinary team experiences while in their undergraduate academic phase of professional development.

Ms. Marken received an Instructional Development Grant through the University of North Dakota for development of this course. We are fortunate at UND to have this financial support available to faculty for new instructional pursuits. Instructional Development Grants at UND are available on a competitive basis for faculty members, providing them with time as well as funding for their instructional endeavors.

We are also fortunate to have a dean of the College of Human Resources Development who is supportive of our work (philosophically and financially). Our College has a formal procedure for implementing a new course on a trial basis. It involves first an organization of the course, approval by the college, assignment of a call number, and an understanding that it will eventually become a permanent course under one department. This process seems to facilitate interdepartmental work and allows time to develop new courses successfully.

With the background of this college support as described, Ms. Marken began seeking the support of department chairpersons and interested faculty members from eight departments on campus in addition to our own department, Occupational Therapy. As an interested faculty member, I became involved as coordinator of the new course.

At this point in time, one person from each department became visible and expressed interest in becoming involved on the committee to develop an interdisciplinary team course. From this time onward, I was involved in the group dynamics of our committee namely, the process of building group rapport, trust, cohesion and defining our purpose.

We began to become familiar with each other as individuals and professionals, sharing our past experiences on teams, our hopes for the course, our specific talents and interests, and sharing our doubts or political anxieties. For example, we shared comments such as "this course will never actually get started," "I would like to spend a whole hour discussing my profession," "my profession is not understood at all by the public," and "my department chair does not want me to spend too much time on this project."

As familiarity with each other grew, enthusiasm built, attendance at meetings increased, and a genuine commitment emerged to help us continue the momentum to develop and implement our course. I feel an effective core faculty is essential to a team course development. Our faculty team developed a respect for and a willingness to learn from each other. We developed a working relationship that served as a positive image for our students.

Our faculty's consensual, broad objective for the course was: to prepare undergraduate interdisciplinary students for future roles as members of human services teams. Our underlying belief was: effective teams lead to successful patient treatment outcomes.

Our committee wanted to prepare students for the "real world" so that they would be better able to understand team dynamics and effectively function as interdisciplinary team members. Part of developing an understanding of teams seems to involve having information about how each discipline specifically functions. Also, the students' understanding of similarities and/or differences among the professions seemed important to us. Therefore, a majority of our course content focused on the role and function of each discipline.

"Team Planning in the Human Services" was offered for the first time during spring semester of 1985-86 for one semester credit. Thirty students enrolled, with the distribution of students as follows: Social Work, 8; Occupational Therapy, 8; Dietetics, 5; Special Education 3; Nursing, 3; Speech; Pathology, 2; and Recreation, 1.

Our course schedule proceeded as illustrated below:

Session 1	Introduction of participants/faculty. Course requirements & objectives. Introduction to team theory.
Sessions 2 - 10	A description of the role, function, and team contributions of the following disciplines: Nursing, Occupational Therapy, Social Work, Dietetics,
Sessions 2 - 10 (continued)	Recreation, Speech Pathology/Communication, Special Education, Physical Therapy, and Medicine.
Session 11	Family involvement.
Session 12	Role playing: Learners as participating team members.
Session 13	Panel discussion: Questions from learners to faculty panel members. Course wrap-up and evaluation.

The text for required reading was Naomi Brill's 1976 edition of Teamwork: Working Together in the Human Services. Permission was received from J. B. Lippincott Co. for its reprinting.

Individual class sessions involved the following: Individual faculty members focused on an explanation of their professions and their involvement on human services teams. Faculty were free to add various components of team theory to their sessions. For example, elements of effective communication were presented with the speech pathology lecture and transdisciplinary teams were introduced during the special education session. Specific classroom instruction included: group lectures followed by discussions; panel presentations; small group discussion activities; case study presentations; and role playing activities.

According to a survey taken at the completion of the course, students found the case study and role playing to be the most effective activities, followed by panel presentations, small group discussions, and finally, lecture with large group discussion. Faculty surveyed had similar viewpoints; however, they saw the small group discussions as the most valuable activity and perceived the large group lecture and discussion sessions as more valuable than the students rated them (85% favorable versus 46% favorable).

The class activities that generated the most interest, comments, and controversy from the students were the panel presentations, the transdisciplinary team information, and the role playing activity. I will explain each more specifically. The panel presentations in the recreation sessions included: guest speakers from practice in a variety of settings. In the last class session, questions were submitted by the students to the eight faculty members to answer individually or collectively. Panel presentations were viewed as being valuable by the students. I believe this is true because: 1) the panels provide experienced professionals as role models and 2) panels provide the elements of spontaneity, visual/auditory variations, and chances for the audience to interact with the panel members. Variety, of course, adds interest to any learning format.

Secondly, the transdisciplinary team information was perceived as highly controversial by the students. They commented on its contribution to role blurring and to generalized versus specified treatment. This topic served as a springboard to a discussion of specialization and also professional egocentricity. We found that students are often professionally egocentric at this point in their education and do not always possess the information, self-confidence and/or flexibility of thinking to consider the value of transdisciplinary teamwork. Therefore, some topics can facilitate a cognitive dissonance for students which then can be channeled toward new learning and professional growth.

Finally, the role playing activity involved breaking up the students into several small groups of 4-5. Students were given a patient case study, asked to assume the role of another discipline from their own, and then to plan and implement a short team meeting for the class members. This activity was either highly valued or highly criticized by the students. On the favorable side, they saw it as a chance to integrate their knowledge of professional roles using a "realistic" situation. They also saw it as a means of active participation and involved learning on their part. On the critical side, some students felt the activity was too difficult. Specifically, it was found difficult to role play another profession when one is still learning one's own role and professional scope.

Finally, I would like to present some of our faculty ideas for team class activities which coincide with the students' perceptions and needs. First, activities making use of role models and maximizing imitation and observation could be utilized. Examples may include: faculty interaction and role playing, guest panel presentations, use of teamwork audiovisuals, actual clinical observation of teams, or text examples. Secondly, activities involving active learning and participation may be helpful. Suggestions for learning would include: role playing, videotaping and critique activities, small group discussions, verbal interaction with professionals, written or verbal analysis of case studies, or team planning and problem-solving activities. Third, we are planning to provide situations which create some cognitive dissonance for students (or which would tend to challenge students' existing knowledge and beliefs). This could be done via presenting nontraditional team models, discussing ethical issues, problem-solving which highlights broad versus specific issues (or the complexity of human situations), or asking students to interview clinical professionals. These three areas of class activities are of interest and concern to our UND team course faculty members. We plan to base our future course development upon these areas but also continue weaving team theory throughout the curriculum.

In conclusion, I have taken you through our team course planning process and have identified some necessary foundation criteria including: university and college-wide support, faculty investment and cohesion, and activities which meet student needs for learning teamwork theory. I have presented class activities that our students identified as contributing to their learning and also our faculty's specific class activity ideas for developing our course. It is my hope that from our experiences at the University of North Dakota, presented today, you have gained information for your thought and consideration which will facilitate your team course development for tomorrow's health care professionals.

INTRODUCTION

INTERPROFESSIONAL CLINICAL EDUCATION EXPERIENCES

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Clinical education lends itself well to interprofessional learning experiences. These experiences provide an environment for training students, delivering health services and building collaboration between service providers and academic faculty.

In the experiences described below, students from medicine, nursing, dentistry, dental hygiene, pharmacy, physical and occupational therapy, social work, psychology, have opportunities to share expertise from their professional disciplines and increase their skill in functioning as interdisciplinary team members. In selected cases, the educational centers have been innovative in coupling the training of students with delivery of services in undeserved areas. Students are encouraged to view the patient or client in the context of the home and society, therefore, broadening their perspective of care to include health promotion and disease prevention. In addition to training activities involving direct service by students, some educational centers have emphasized the dynamics of interprofessional case management and treatment planning in the conference setting.

The following presentations provide insight into the development of successful interprofessional educational experiences.

INTERDISCIPLINARY-PRIMARY HEALTH EDUCATION IS ALIVE AND WELL IN THE BRONX

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The Nursing Department of Lehman College strongly believes that one way of providing optimal health care is through an interdisciplinary, primary care mode of delivery.[1] With this goal in mind, they joined the Albert Einstein College of Medicine's "Family Life Program" in 1971. This mode of delivery is defined as the emphasis of the continuity of health care for the client/family that includes preventative, diagnostic, curative, and rehabilitative services. The interdisciplinary aspect allows for more effective, better coordinated, and better quality care for clients through the collaboration of individuals who bring together diverse skills.[2] It is our belief that communication is basic to the interdisciplinary team approach. In a time of increasing knowledge and technology, there is a trend toward less personal care. Therefore, this team experience helps the student recognize early in their client contact the relationship of health to clients' cultural, economic, psychosocial, and medical background.

Primary care allows our students to work with a developing family in a well situation over a period of time. Our emphasis is with providing a beginning professional relationship that may continue through the students' education or may terminate a few months after the birth of the baby.

First year medical and nursing students in the Family Life Program are introduced to the delivery of health care by assisting an interdisciplinary team in the care of a pregnant woman during the last trimester of her pregnancy, her delivery, and during the early part of the well baby care. The initial care is given in the Women's Center of the Bronx Municipal Hospital Center which is organized into teams. There are approximately 10 nursing students and 36 to 54 medical students. Therefore, some of the student teams are not interdisciplinary. The Family Life Program is organized in the following manner: (1) team of first year nursing and medical students or team of two medical students; (2) obstetrician and nurse-midwives team in prenatal, labor and delivery, and postpartum unit, and (3) preceptor conference teams of obstetrician, nursing instructor, social worker, psychiatrist or psychologist, pediatric nurse practitioner, and pediatrician.

Clinical Responsibility

The team of nurse midwives and obstetricians is responsible for the clinical care of the women. The pediatricians and pediatric nurse practitioner are responsible for the newborn and well baby visits as long as the family stays in the program.

As the student teams are in their first year, the preceptors deliver the actual care and in this way act as role models. Clients are given appointments so that teams have one-half hour to talk with them. This allows time for the client-student teams to begin to establish rapport paying attention to both verbal and non-verbal messages. Bernstein's[3,4] work with social class differences in language use claims that working-class and middle-class individuals use restricted and elaborated communication respectively.

He found that working class patients are more apt to express non-verbally their wish for information. These findings have not always been supported by our students' experience and, often, sociolinguists research. Some student teams have been able to get no more than "yes-no" answers to questions. However, after their supportive role during labor and delivery, clients have repeatedly stated, "I couldn't have done it without you." On the other hand, some clients remain reserved throughout the contact and their student teams feel that they were not able to establish as close a relationship as other classmates. After the initial trust has been established, the students can begin to take a history, serve as client advocates, and do some of the following procedures they were taught: taking blood pressure, checking urine, listening for the fetal heart, palpating the abdomen, and doing Leopold's maneuver. The students continue to gather data so as to identify needs and actual problems that clients/family may have. Students have helped clients gain financial assistance, food stamps, participation in Women Infants Children Food Program (W.I.C.) whereby they obtain food supplements and nutritional education. Our students are very eager to encourage breast feeding and they are able to encourage many clients to consider it. On the other hand, they have to accept the clients' decision to formula feed without feeling that they have failed. This experience in teaching/learning brings into awareness the fact that the client is an important member of the health team and ultimately her cultural background plays a very important role in her health practices.

As the therapeutic relationship develops, more data is gathered which is not always consistent with the initial history. The students come to terms with the fact that the initial history is not always reliable as a sense of trust has not yet been developed. These issues are usually discussed in the supervisory sessions.

Patients contact their students when they go into labor so that they can be supportive and participate in this event. The student teams have observed a delivery in the unit prior to this so that they are familiar with the unit and labor and delivery. The patient is delivered by the labor and delivery staff who are usually not their clinical team. Therefore, the student team plays a very important role as familiar faces. Many of our students attend Preparation for Parenthood classes and help with coaching.

Home Visits

Prenatal and postnatal home visits are made by the student teams and a faculty member who is either a social worker, nurse, psychologist, pediatrician, or pediatric nurse practitioner. The entire family is encouraged to be present. Therefore, some of the visits are made in the evening or on weekends. Many families are honored by a home visit by "their doctor and nurse" and treat them as honored guests. A few clients avoid this visit due to a variety of reasons.

These visits help us meet the father and other family members. Some visits allow for siblings to express their feelings about the new baby and allow the children to see the health professionals in their home. This contact gives the other family members an opportunity to meet "the students" about whom they have heard. The home visits allows us to observe the living conditions and preparation for the new baby. Safety is always discussed in relation to the home for both newborn and siblings. An awareness of the housing and community of their clients makes the student teams more conscious of what kind of teaching is appropriate. It also stresses the role of the environment in relation to compliance with health teaching. The home visit in relation to problems in housing is very frustrating due to the lack of affordable, adequate housing in our area. This community experience sensitizes some of our students to the fact that political action by professionals and clients is necessary.

The postnatal home visit is usually made within two weeks of discharge from the hospital. Clients are encourage to call if they have any questions. This home visit is a time when the mother may have questions about her own health, breast, feeding or care of the baby. It also gives the student team and client a chance to review all that has gone on in their relationship. The preceptor and students can once again examine the baby and teach the mother about signs of illness that require medical care. The mother participates in the exam and normal behavior and physical characteristics are explained. At this time, family planning is once again discussed and arrangements are made for students to be at the clients' 6-week check-up and newborn visit.

Supervisory Sessions

The supervisory sessions take place on Monday afternoons, the same day before or after the students have seen their client in the Women's Health Center. The supervisory sessions demonstrate the workings of the interdisciplinary team. The group sessions include: preceptors from obstetrics, pediatrics and psychiatry, a nursing instructor, midwife, pediatric nurse practitioner or social worker, and 8 to 10 students who are working with 4 to 5 clients. The major portion of the teaching is done in these sessions in a relaxed, loosely structured environment. Each teaching team evolves its own style and a leader emerges. Freedom of discussion is encouraged, but there is an overall purpose and direction. The preceptors maintain an open dialogue and have worked with each other over a period of time. Some preceptors may meet in order to organize the sessions so that the following goals can be reached:

1) Students present their clients so that clinical teaching dealing with specific issues that could not be gone into in the limited time in the examining room are explored.

2) Issues relating to student team encounter with patient, including psychosocial aspects of the patient's situation and students' reaction to the above.

3) Impart knowledge to the students on a specific group of topics.

4) The students have the opportunity to see health workers from different professions share in the teaching and appreciate their contributions.

5) provide a broader experience by hearing about other student teams and their clients/families.

6) Allows the preceptors to have extended contact and discussions with students so as to make a meaningful evaluation of the student's work.[5]

Evaluation

Evaluation of the program by the students is done verbally at the end of the semester in a supervisory session as well as through two written evaluation questionnaires. One questionnaire is for computer tabulation and the other is a narrative evaluation. For the September 1985 semester, the results of the formal evaluation questionnaire reflected highly positive ratings for the Family Life experience. Evaluation of the students is done informally throughout the course if needed, but done formally by the supervisory group.

Summary

The primary goal of the program has been to provide an experience in the continuity of health care for first year nursing and medical students. The excitement and richness of this experience hopefully lays the foundation for holistic, humane care in an interdisciplinary-primary care framework.

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USING ACTION RESEARCH IN BUILDING INTERDISCIPLINARY ACTIVITIES
A CASE CONFERENCE - AMBULATORY CARE

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Establishing an education opportunity for health professions' students in a busy health service unit requires careful attention to strategies of change and action research. This paper presents a model of building collaboration between service providers and academic faculty.

Disciplines represented include: allied health, clinical dietetics, physical and occupational therapy, nursing, pharmacy, and social work. The Burgdorf Health Center in Hartford, Connecticut encompasses University clinics, an Easter Seal Rehabilitation Center, a VNA, and a City Health Department. A local neighborhood health center and a hospital-based clinic also participate.

Strategies of action research were used to provide a climate of collaboration and to build the procedures for a successful interdisciplinary educational experience for many disciplines in a service--"real-life" setting.

Action research can be defined as a process model whereby behavioral science knowledge is applied to help solve problems. Some theorists differentiate this model from Intervention strategies and those using Planned Change principles. Change agents often utilize several approaches as the organizational change process is occurring and demands for approaches vary.

The establishment of common change goals whether using a Management by Objective approach, a Delphi model, or some other strategy is key to any change effort. The direction of change needs to be accepted by the social systems involved and fully adopted by the key players.

Bennis et al (1969) state that although social change theory is not fully developed, some basic concerns have been identified which are important in building strategies for change. Variables included in the data gathering, and alternatives generated, must be those that can be manipulated; be congruent with the value systems of those individuals or organizations; not be prohibitive in cost; have reliable measures for diagnosing the problems or the climate for change in the system, and be clearly communicated to all involved.

The basic principles common to the model are first that the client, whether individual or organization, is an integral part of the change process; hence, a collaborative process is used between client and consultant at all stages of the problem solving process. This requires open communications between all individuals in the system.

Secondly, the rational approach to planned change, as opposed to non-directed change, adopts a scientific problem solving methodology. A systematic process of collecting data, analysis of the data for problem diagnosis, development, and implementation of solutions, and evaluation and recycling process are inherent in the "research" component of Action Research.

Third, Intervention Theory using the work done by Lewin and others suggests that change requires an "unfreezing" of the social system. The intervention has as its primary focus the facilitation of behavioral change at all three stages. It, too, assumes that the role of the change agent is to help the client collect data, analyze the problems, have free choice of action, and clear ownership of the process.

Fourth, Planned Change efforts are based on the premise that information is only useful if it can be directed towards action. Force field analysis is used as a tool to identify those variables or forces that impact on achieving the desired goal.

Fifth, the interaction between research and action occurs at each stage of the action research process from entry through evaluation and recycling.

Sixth, change requires flexibility. As new data are collected new strategies need to be developed. Social systems in organizations are constantly changing and each time a new individual enters the system or the environment changes outside the system, the data are different and the diagnosis must change. Adaptability is key to keeping the change process in motion.

Seventh, the dynamics of the planned change and action research methods must ensure that the change agent is not solely responsible for the change, but that each participant takes responsibility for the change effort.

Finally, ongoing monitoring and evaluation are key ingredients in the success of the change effort. The methodology of action research has been more fully described by Frohman et al (1978).

The Need and Historical Overview

Beginning in the late 1960's a concern for increasing access to health services for rural and urban low income communities also stimulated an emphasis on training new types of providers (such as nurse practitioners and physician assistants) as well as developing interdisciplinary health teams to more effectively deliver primary care to these under served populations.

The development of interdisciplinary educational experiences evolved from these trends. In the early 1970's an informal group met at the University of Connecticut to explore curricula for interdisciplinary educational experiences. This group became the nucleus for a variety of educational activities, synthesizing competencies and educational objectives for interdisciplinary educational efforts. During this same period, the University of Kentucky received a large federal grant to enlarge upon a community based program for students from many disciplines. The grant provided opportunities for students from other parts of the country to participate. Nursing and allied health students from the University of Connecticut attended these sessions for several years. The grant also provided consultation, workshops, and other educational materials which stimulated interest and provided support for universities and colleges to establish similar programs. Students from New England continued to participate until the grant ended in the late 1970's.

In addition to stimulating the growth of new health provider roles and interdisciplinary teams, the federal government was also active in encouraging the growth of family practice as a specialty among physicians. One family practice physician at the University of Connecticut who had been involved in the interdisciplinary approach to primary care worked with several other medical schools to develop a pilot experience for students to work in teams in a primary care setting. The clerkship included competencies related to interdisciplinary care. Because of limited funds, the experience was not continued beyond the pilot program. Nevertheless, it did introduce the value for collaborative decision making among disciplines and provided the students with insight into the nature of the other disciplines.

The next endeavor to establish a community or clinically based educational experience was jointly initiated by the disciplines of medicine, nursing, allied health, social work, and pharmacy. A pilot was developed and planned as an adjunct to a university family practice setting. A concerted effort was made to develop a faculty team which would work with a student team caring for clients/patients from the family practice. This program was in operation for two or three years. The practice setting never fully accepted the concept and therefore limited the available client population. Due to this limitation, the educational emphasis has to be placed on the process of team building rather than the "content" of the patient/client needs. This experience developed a faculty with more skills and insight into the complexities of team building, particularly as a change from existing norms of practice. The creation of a model which was not integrated into existing modes of practice was clearly contrary to theories about social change and organizational survival. It was viewed as artificial by the students and, predictably, did not survive.

On the basis of these experiences, a committed and seasoned faculty was developed. This faculty recognized the importance of applying social change theory to the development of new educational programs. The principles of action research and change were used to begin the next experiment. It was evident that the following set of assumptions and goals needed to be adopted:

> The experience must be authentic. The patients/clients must be real people who are involved with more than one discipline in their ongoing care.
>
> The clinical practice should have a broad base. Key disciplines must be involved... medicine, nursing, social work, physical and occupational therapy, dietetics, and pharmacy -- not necessarily with every case but with most.
>
> The environment/climate of the schools and the service agencies must be supportive to the activity.
>
> Role models for each discipline must be readily and consistently available.

Financial support must be part of the system. External funds, although helpful, cannot be relied upon. Commitment from faculty and staff to work on the program must come from each agency.

A realistic balance between content and process must be established in the curriculum design.

It is clear that the value for the educational process is maintained only if it affects the care or service provided. The faculty decided that the next interdisciplinary educational effort would be developed at a site where a variety of students were available and where staff had a commitment to educational program development.

Initiating the Action Research at Burgdorf

The informal Interdisciplinary Action Group (IAG) began to seek other sites and methods to meet the stated educational needs. The Burgdorf Health Center (BHC) was targeted as a potential new site for future student interdisciplinary activity. Representatives from the centers' various health agencies and the health professional schools of the University were invited to attend the initial meeting. Through force field analysis, a group of university faculty and agency representatives identified the conditions for designing the interdisciplinary experience. The results of this process consisted of 1) identification of the available student population, 2) identification of supports and constraints of the experience, 3) brainstorming to identify the format for the experience, 4) criteria for the case selection process, and 5) specific goal setting, i.e., determine the next steps necessary to actualize the experience, 6) expected outcomes, and 7) team activities.

Supports. At the conclusion of this exploratory meeting it was determined that BHC could, in fact, support such interdisciplinary activities. There was already a pool of various health professional students affiliating with the BHC agencies each semester.

The supports for this endeavor were identified as: commitment of members of the IAG to the experience; availability of the Area Health Educational Center's faculty (AHEC); a large client population which was accessible and diagnostically and culturally varied; a prior history of regular agency and University meetings in the form of grand rounds; available space to house conferences; an on site health library; the existence of a stated goal of the BHC to develop interagency service linkages; and a stated goal of AHEC to support interdisciplinary activities in a center caring for a medically under served community.

Constraints. The constraints were identified as: agency-specific records; agency territoriality; complexity of communication patterns between and among participating agencies; lack of uniformity among student schedules; lack of consistent supervision for students; potentially conflicting decision making functions and authority; coordination issues related to the large numbers of individuals involved; goal differences among agencies; uncertain funding of university clinics; concerns about staff time allocation taken from direct service delivery.

Overall the constraints, although serious, did not seem to outweigh the existing supports in establishing interdisciplinary student-focused activities at BHC.

Format and Structure. The first decisions about the format and structure of the experience were: 1) The case conferences would be one hour long, 2) clinical faculty from each agency would be responsible for at least one conference, and 3) clinical staff would be involved as the primary service providers, and 4) The IAG would assume the responsibilities of planning and coordinating the case conferences.

Criteria for Case Selection Process. The process for case selection included: the involvement of more than one discipline and agency through the IAG which would be comprised of clinical faculty, agency preceptors, academic coordinators, and other involved people. The experience was identified as "educational" not "service;" four institutions would be involved: the visiting nurses, rehabilitation center, university medical clinics, and the health department.

Building a collaborative group which is characterized by high levels of trust requires much time and energy. Decision-making must involve each member ensuring a plan which is realistic and possible within the constraints of the (BHC) organization. The planning process required that each individual not only participated in the planning process but also accepted the data, diagnosis, and final plan.

Format Guidelines. The guidelines for the format and outcomes were agreed upon as follows:

1. Case will be selected by agency or school or student preceptor. The case will exemplify a problem using many disciplines and/or agencies for the care provided.
2. Case will be presented by the student. The conference will be moderated by the faculty or agency preceptor. A brief description of the case will be distributed so that faculty, staff, and students can prepare themselves for contributing to the discussion.
3. The moderator will serve as a facilitator of the discussion which will be geared to exploring all facets of the problem to include the community, the family, the client. The moderator will insure that the appropriate resources will be available at the conference.
4. IAG members will act as conference coordinators by sending notices, locating and scheduling places, linking with faculty and student presenters, and compiling evaluation data.

Expected Outcomes. Included in the discussion were references to the following project outcomes:

1. An opportunity for students and staff from the Burgdorf agencies to discuss cases seen by more than one discipline and more than one agency as an educational problem solving activity.
2. Case management demonstrating coordinated care, comprehensive care, and effective utilization of services.
3. Provide an opportunity for the discussion of issues evident in the

case, i.e., legal, economic, social, and political implications exemplified by the case.
4. Stimulate interest with the students for an interdisciplinary approach to health care as part of professional development.

Team Activities. The group also decided to collect information on the existing health service teams in the region for students. The data would include:

1. Contact person - team manager.
2. Structure of team - members, agency, etc.
3. Description of team's activities.
4. Meeting times.
5. Possibility of and criteria for student involvement such as observation or participation.

A year after the first meeting the stage was set for the very first student interdisciplinary activity at this health center.

The First Conferences at Burgdorf

The first case conference was held on March 11, 1982, in the classroom of the Visiting Nurses Association at BHC. The client presented was referred to the VNA by BHC's geriatric clinic. The student presenter was a senior nursing student. The faculty were the University clinical instructor and a client care coordinator from the VNA. Additionally, the State Department of Income Maintenance was involved with the case. Twenty-four students and health providers were present representing allied health (clinical dietetics, PT, OT) social work, nursing, medicine, and pharmacy. The evaluation of this first interdisciplinary endeavor proved encouraging and helpful for future presentations.

Two more case conferences were presented that semester. Both met with similar degrees of success. The summary evaluation of all three (see Figure 1) provided the IAG with further data for improvement.

FIGURE 1
Summary Evaluation
Interdisciplinary Case Conference
March 11, 1982, April 1, 1982, April 20, 1982

The evaluation of each of the following objectives are found below:

1. The conference will provide an opportunity for students and staff from the Burgdorf agencies to discuss cases seen by more than one discipline and more than one agency as an educational problem solving activity.
2. The presentation will exemplify case management that demonstrated coordinated care, comprehensive care, and effective utilization of resources.
3. The format will provide an opportunity for the discussion of issues evident in the case.
4. The process will stimulate interest for an interdisciplinary approach to health care.

Figure 1 (Continued)

1. OUTCOMES

	Met	Partially Met	Not Met
Objective #1	50 (79%)	13 (21%)	
Objective #2	43 (69%)	19 (31%)	
Objective #3	58 (92%)	5 (8%)	
Objective #4	50 (81%)	12 (19%)	

2. DID THE APPROPRIATE DISCIPLINES PARTICIPATE?

Conference	Yes	No
1	16 (66%)	8 (33%)
2	12 (75%)	4 (25%)
3	19 (86%)	3 (14%)

Additional Disciplines

Social Services	19	Religious Counselor	3
Nutritionist	6	Friendly Visitor/Family	4
Home Health Aides/VNA	5		

3. WAS THE INFORMATION GIVEN:

	Conference	Yes	No
Appropriate	1	24 (100%)	
	2	16 (100%)	
	3	21 (100%)	

	Conference	Yes	No
Sufficient	1	18 (75%)	1 (25%)
	2	15 (100%)	
	3	13 (72%)	5 (28%)

4. WAS THE CONFERENCE WORTHWHILE TO YOU?	62 (100%)

Comments

Strengths

- helpful for other cases
- realistic not idealistic
- interdisciplinary approach good
- interdisciplinary communication among disciplines
- different aspects of issues brought out by many different people

Suggestions for Improvement

- need clarification of issues and recommendations
- need more student participation, particularly medical students and residents

Subsequent Conferences at Burgdorf

An evaluation and planning meeting was held in May 1982 and resulted in several suggestions for future case conferences:

- The presenters, or faculty, should acknowledge that there are limits to what can be done with some clients or patients.
- Cases should be selected after the initial evaluations are completed.
- Students should be encouraged to seek out students with other agencies involved and discuss the case with them prior to the conference.
- Material on family dynamics should be included.
- During the summary, discussion should include process issues of problem-solving or communications that were evident in the case.
- Support should be provided to the students to lower anxiety.
- Participation by medical students should be increased.

The AHEC representative to the IAG had already begun laying groundwork to include this experience for the fourth year medical students in the Primary Care Clerkship. During this period, three more case conferences were scheduled for Fall 1982.

Coordination and Further Evaluation

To this point the major coordination responsibilities for the IAG were assumed by the School of Allied Health and the School of Nursing. At the end of the first year, representatives from both schools found it more difficult to allocate the time and cost for such coordination. At the same time AHEC's relationship with the University and participating agencies had become well established. The AHEC representative was invited to the evaluation and planning meeting of the IAG in January 1983. Evaluations of the Fall 1982 case conferences were reviewed. Several recommendations were made:

- The host agency should provide the moderator for the case conference. If the preceptor feels too close to the case being presented he/she will choose another agency person to moderate.
- Host agency with student(s) should choose case for presentation.
- A case synopsis should be presented to AHEC at least two weeks prior to the presentation.
- AHEC should disseminate the synopsis to all involved agencies for distribution to individual practitioners and students.

- UConn coordinating faculty should maintain links among agencies and administer the planning and evaluation meetings.

- The mode of presentation and the objectives were retained.

AHEC's willingness to assume some of the coordinating responsibilities was welcomed by both the university faculty and agency representatives. Additionally the evaluation form for the conference was streamlined. Three case conferences were scheduled for Spring 1983. A modified system for case presentations was established, so that the IAG decreased the frequency of its meetings to one evaluation and planning session per semester.

Throughout spring semester 1983, all BHC agencies were participating in case presentations. These agencies facilitated the participation of other college students in presenting cases. The IAG representatives also reported a smoother interagency communication network because the staff of each agency had "met" during a case presentation and were able to feel a sense of teamwork. This was viewed as very beneficial to the overall health care delivery of the BHC. Both students and staff were identifying tangible rewards as a result of their participation in the case presentations.

The summary evaluations for Spring 1983 presentations indicated that objectives were being met, appropriate disciplines were participating, and that conferences provided a worthwhile experience for all involved. Two areas were again identified as needing further development: more active participation of students in the discussion, and participation of medical students in the presentations.

A Year of Changes: 1983

Only one case conference was held in Fall 1983 because the BHC experienced a significantly decreased student pool. At the same time AHEC was undergoing a change of personnel so that the next evaluation/planning meeting of the IAG was not held until March 1984. Further, due to the lateness in the academic year, a decision was made by the new AHEC coordinator not to submit a written case synopsis prior to the conference. This decision was a deviation from the established format of prior review by the IAG. During the subsequent IAG meeting this change was accepted. Because members perceived the prior circulation of the synopsis to be cumbersome and unnecessarily time consuming, the unilateral decision made by the AHEC coordinator, while procedurally unprecedented, was accepted.

The increased support of the medical school faculty for the conference resulted in medical student attendance at the Spring 1984 presentation. These and other new IAG members needed an orientation to the format, outcomes, and procedures of the conferences. The remainder of this meeting focused on the planning of the Fall 1984 presentation.

Review of evaluations from the Fall 1984 conference yielded new recommendations regarding the moderator, cases, and format. It was decided that: the case conference moderator should be someone not directly involved in the care of the patient. Additionally, it was recommended that the moderator should be oriented to the format of the conference and be able to draw out participation from students. The case selected for presentation should remain anonymous, represent a multidisciplinary or multi-agency involvement in care delivery, and have been active long enough for in depth problem identification but no so long that all solvable problems were resolved. The hour-long case presentation was to be divided into specific, time-allocated activities: 5 minutes for self-introduction of participants; 10-15 minutes for presentation of the case; 30 minutes for problem-solving discussion; and 5-10 minutes for wrap-up, goal-setting, and evaluation.

Fall 1984 brought another transition in the coordination of the interdisciplinary activities. AHEC had completed its project and the AHEC coordinator transferred the coordination of the IDCC to the University School of Medicine PCC coordinator. This was done without the participation of the IAG. When this transfer of coordination was announced at a PCC meeting, an IAC member present realized there had been no formal communication with the IAG. This member contacted the former AHEC coordinator to suggest that such communication occur. On the basis of this, a letter was sent to the IAG by the former AHEC and present PCC coordinators which began, "CONGRATULATIONS! Because of the quality of the conferences you have provided, the Primary Care Clerkship committee has voted to include an Interdisciplinary Case Conference as part of each rotation." In addition to the unintentional condescending tone of the memorandum, there was a usurping of the IAG's authority, i.e., "We propose to address these issues [additional workload of more conferences] by scheduling..., recruiting..., and assuming responsibility for identifying cases and presenters..." This usurpation exacerbated the traditional conflict between medicine and other health professionals in interdisciplinary activities, and threatened the consensual decision-making process of the IAG.

At the conclusion of the memorandum, a meeting was called to plan for the Spring 1985 case conference. At this December 1984 meeting, the rationale for change of coordinating organization was discussed, and, for a variety of practical reasons, the IAG found this change acceptable. The date was set for the conference which was held in March. There were some procedural problems with the conference which made it apparent that the new coordinator needed further orientation to the IDCC. In retrospect, the IAG members should have played a more active role in orienting the new coordinator. As the framework suggests, "the dynamics of the planned change and action research methods must be to ensure that the change agent is not solely responsible for the change but that each participant takes responsibility for the change effort." Consequently, the PCC/IAG member met with the PCC coordinator to discuss the IAG's history, goals, objectives, and procedures for the conference. A subsequent IAG planning/evaluation meeting was held during which all case materials were reviewed and the evaluation form was revised to reflect more clearly the objectives of the conference.

New participants feel the strain in group change, especially when thrust into key roles. The coordinator of the PCC did not know much of the history of the IAG, and had only recently become involved as medical student participation in the case conferences had been encouraged. As the AHEC's funding ran out, arrangements were made by the medical school to assume some of the community activities and liaison work which had been provided by AHEC. This included the coordination of the IDCC.

The PCC began in 1982 as a required 6 week, fourth year medical school clerkship. The PCC had itself gone through a transition period in terms of being accepted by medical students and developing working relationships with community agencies. By 1984, the clerkship was on a good footing vis-a-vis these issues, and the PCC committee felt comfortable about making the IDCC a requirement for the medical students. This met the IAG's desire for medical student involvement, but it also presented a conflict in terms of scheduling priorities, e.g., the PCC preferred a case conference in each six-week rotation, and also wanted to avoid scheduling this conference in the same week the medical students had another major case conference scheduled. All the other students who participated were on an academic semester schedule. The PCC coordinator offered to have the PCC medical students and faculty accept responsibility for these extra sessions. The end result of these proposals was that the IAG tried to work around all student schedules. From the coordinator's perspective, it seemed that the IAG felt the medical school was trying to takeover the conferences. The full understanding of some of these relationships was not clear until the actual writing of this paper when a sequential systematic review of the events by key participants occurred.

After the initial turmoil of this year, there were two case conferences held in 1984-85. These had overall ratings of 3.7 and 3.9 respectively (1 = poor, 5 = excellent). (See Figure 1 for complete ratings.) By Fall 1985, the IAG was once again functioning on a consensual model and the PCC coordinator was well integrated as a group member. In the 1985-86 academic year, there were 3 case conferences which received rankings of 3.95, 3.52, and 4.2. This variation in rating again was based on the lack of adherence to the case selection criteria described previously. Another compounding factor in the 85-86 year was a change in the conference moderator. This is a critical role in terms of involving students from different disciplines in the discussion and reinforcing and integrating principles of interdisciplinary work and patient-oriented, coordinated care.

Yet another factor was the wording of the evaluation form for one of the objectives which consistently received a lower rating. It stated, "The presentation will exemplify case management that demonstrates coordinated care, comprehensive care, and effective utilization of services." The wording of this objective is inaccurate since the cases are not selected to be exemplary, but rather illustrative of the issues in interdisciplinary patient care. Since the best cases were still active, there was an important problem-solving dimension to them. This is an objective which needs revision. Presently the case conferences are continuing to operate smoothly, and the entire action research process is being repeated.

Conferences at Present

One IAG planning meeting is held prior to or at the beginning of each semester. IAG members review conference evaluations, make recommendations for future conferences, and consensually schedule conferences for that semester. New faculty agency representatives and others involved in the IDC conference are invited to participate in the process.

The case conference moderator is expected to be someone other than the primary care provider who is oriented to the format of the conference, and who is able to draw out participation from students representing the various disciplines. The case selected for presentation should remain anonymous, represent a multidisciplinary or multi-agency involvement in care delivery, and have been seen enough for in depth problem identification but not to the point that all solvable problems were resolved. The hour-long case presentation was to be divided into specific, time-allocated activities: 5 minutes for self-introduction of participants; 10-15 minutes for presentation of the case; 30 minutes for problem-solving discussion; and 5-10 minutes for wrap-up, goal-setting, and evaluation.

Interdisciplinary Issues

From four years experience, four issues have surfaced which necessitate continued energy from team members and are consistent with the concepts of change. They are:

1) Trust
2) Coordination
3) Ownership and Responsibilities
4) Moderating Function

The trusting relationship developed among the various participants needed to be maintained. Though each discipline was consistently represented, the individual participants changed. The level of commitment of agency and academic preceptors directly affects the level of student participation.

Open communication and support among team participants has continued to nurture a trusting relationship even when new individuals are added. Such issues as role ambiguity and role overlap are openly introduced and discussed - thereby strengthening initial bonds.

Coordinating functions and responsibilities have also merged as critical issues. Based on the norms of the IAG the decision making function was the domain of the committee and the managerial functions of sending agendas, calling meetings, and distributing minutes were the responsibilities.

As an example, when coordination remained consistent, though shared as with Allied Health and Nursing, the number of conferences each semester remained constant. As coordination became more unilateral (autocratic) and transference became abrupt, the number of conferences decreased (e.g. AHEC to UConn Medicine). Any deviation in the norm needs attention, otherwise confusion in roles and functions occurs.

Shared ownership and responsibilities have developed. Initially IAG participants developed an understanding about the major thrust of the IDC experience. It is now viewed as an educational rather than a service activity. Through the process of decision making described in the first three sections, the issues of individual commitment, shared ownership, and agency supports have emerged.

Moderating functions continue to be standardized across moderators to increase the verbal student participation, increase identification of role overlap or ambiguity issues, and reflect upon group process issues that may emerge during presentations.

Summary

Our model defines action research as a process whereby behavioral science knowledge is applied to help solve problems. One of the basic principles is that all participants are an integral part of change process and must be included in all stages of the problem solving process. This requires regular, committed involvement and open communication between all individuals in the system.

The IAG in its conception spent much energy in developing trust among all participants. The model stresses a rational approach to planned change. A systematic process of collecting data, analyzing the data for problem diagnosis, developing and implementing solutions, and having an evaluation and recycling process is inherent in action research. The informal group of university faculty and BHC representatives began with the idea for a student health team practice, which evolved into the IDC conference facilitated by the formalized IAG.

The IAG members demonstrated their individual commitment to the continuation of IDCC, while at the same time strove to maintain a team approach in all decision making so that the goals of agencies, faculty, and students would be met. Process problems occurred when individual IAG member's needs superseded the needs of the team. The IAG may be viewed through our model as the change agent whose role is to help the participants collect data, analyze problems, have a free choice of action, and a clear ownership of the process. The IAG planning/evaluation meetings served these functions. These functions included decisions about objectives of the experience, format, mode of evaluation, coordinating responsibility, place, time moderator, and role of model and participants.

As mentioned previously, four major issues continue to require energy from team members. They are: trust, ownership and responsibilities, coordination, and moderator functions. These issues are consistent with the change process framework where the need adaptation and flexibility are continually emphasized.

The interaction between research and action occurs at each stage of the decision-making process. Change requires flexibility. As new data are collected, new strategies need to be developed. Social systems in organizations are constantly changing and each time a new individual enters the system, or the environment changes outside of the system, the data are different and the diagnoses must change.

Adaptation is the key to keeping the change process in motion. The IDC has undergone continual adaptation in its 5-year history at BHC. There have been many different organizational and participant changes. With each change, the IAG responds with the cyclical phases of action research: 1) data collection, 2) data feedback, 3) diagnosis action planning, action implementation, and evaluation.

Overall, the IAG is pleased about the longevity of this interdisciplinary experience and the communication between agencies and disciplines. Individuals have, in fact, been able "to connect faces to voices" and continue to see this as educationally beneficial. This seems to be a professional model of interdisciplinary activities which has proven itself in this setting.

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AN EXPERIMENT IN INTERDISCIPLINARY HEALTH CARE:
THE I.L.A.C. EXPERIENCE

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Introduction

The purpose of this paper is to provide a description of a unique and highly successful interdisciplinary health care team effort. The Institute for Latin American Concerns (I.L.A.C.) experience has promoted the concept of the interdisciplinary team since its inception in 1977. The program is described in order to illustrate an example of successful application of the interdisciplinary health care team concept. This paper examines the existing program and notes adaptive changes over the years that have resulted in program improvement.

The program's selection process, team formulation, essentials of team maintenance, and methods of goal achievement are examined. Implications for education are discussed.

The Program

The Institute for Latin American Concerns (I.L.A.C.) began providing health care to rural inhabitants of the Dominican Republic in 1977. I.L.A.C. was created in 1972 by a group of Cuban Jesuits in the Dominican Republic. The program was originally designed to allow other Jesuits, students, and committed Christians to know and understand the people and problems of Latin America.

In 1975, those Jesuits responsible for I.L.A.C. relocated to Creighton University in Omaha, Nebraska. I.L.A.C. then began providing a number of Creighton students with an experience that enlarged classroom learning regarding the Third World, and allowed for application of the program's aims of improving the quality of life in Latin America. A natural broadening of program scope occurred in 1977 with the inception of Health Care I.L.A.C., a sister program with a stated purpose of providing health care services to remote areas of the Dominican Republic.

In 1980, the two programs (General I.L.A.C. and Health Care I.L.A.C.) were joined. Undergraduate students, health professions students, and practicing professionals were formed into interdisciplinary teams to provide health care via improvised clinics while living with local Dominican families. Students and professionals from medicine, nursing, pharmacy, and dentistry were included within each team. Undergraduate students also worked as members of the health care team.

The merger resulted in a cultural experience in the Third World under the auspices of provision of health care services. Student volunteers from each discipline were secured for participation and drugs were procured from charitable companies and organizations. A small number of students and professionals spent ten-hour days in makeshift medical and dental clinics serving the needs of an ever-increasing number of Dominicans.

As word of the program spread via parish priests and satisfied villagers (campesinos), each summer saw an increase in client load and a corresponding increase in student frustration at such a "bandaid" operation.

In 1983, I.L.A.C. adapted a focus of prevention and health promotion to supplement its existing acute-care regimen. Half-day clinics, home visits, and health education presentations were begun. This "New Beginning" also signaled a decrease in the frustration cited previously by student (and professional) participants. The goal of selecting and training indigenous health care workers (promotorers) was also added in 1983.

Participants spent two weeks in Santiago studying the language, history, and culture of the Dominican Republic. Four weeks are then spent providing health care in rural "campos." The program has grown to average 80 participants per summer. Future plans include a year-round program administered from a central facility campus (Center for the Promotion of Integrated Health). In its current state, traveling teams are sent out in November, January, and March (between lengthier summer sessions) to provide continuity and follow-up care.

The objectives of the program are to:

1. Sensitize the participant to a view of health care from the client's perspective (humanization).
2. Experience the reality of the Third World.
3. Develop an understanding of health care problems not common in the United States.
4. Provide an opportunity to improve the health of others.
5. Expose the student to an interdisciplinary effort.

The Interdisciplinary Experience

The interdisciplinary nature of the experience is carefully orchestrated. The formation of the team begins with the initial selection of students.

The selection process for student and professional participants has improved through the years. Initially, any and all student volunteers were accepted into the program. As the program grew in numbers, the selection process became more like the college entrance application (without the ACT/SAT examination). The screening of applicants has become a necessity as the number of volunteers far exceeded the number of available spaces.

The selection process involves several components: demonstration of a desire to participate; maintenance of an acceptable grade-point average; depiction via written essay of the student's reason(s) for volunteering for the program; and an interview with program administrators and past participants. The interview involves questions designed to identify such personal characteristics as open-mindedness, flexibility, commitment, tolerance for frustration, and personal/ professional security. (It has been noted that those students from large families appear to fare well.) These characteristics have been identified as being present in the successful program participant.

Professionals desirous of participating in the program are screened via a written application form and an interview. Selection of professionals is finalized based upon several criteria: desire, abilities, past participation, teaching experience, and commitment to the objectives of the program. The program is an educational one with selection priority given to educators and past participants.

In 1983, another program modification was attempted. The "retreat" concept was formulated and utilized as an early avenue for team interaction. Once the selection process has been accomplished (December for students, March for professionals), a formal "retreat" (two-day workshop for all participants) is required during the spring. The schedule of the workshop is planned to allow for initial team formation. The selected student/professional group is divided into teams and the team interaction begins. The time needed for development of the team is considered paramount and thus the weekend workshop is a requirement of the program. The success of the team's early cohesion is based upon a belief in a common mission, a shared commitment to the program's objectives, and a high rate of interaction.

The summer program begins in June when the student group meets in Miami to begin the adventure. The summer program is eight weeks in length. The first two weeks are spent in student orientation in Santiago, the second largest city in the country. Professionals do not arrive until after this orientation for students. (Professional participation is set up in two-week blocks as careers rarely allow for five to eight weeks off.) This orientation involves preparation through language instruction, and classes on the history of the Dominican Republic, the cultural heritage of the country, and also the problems of the country. Daily time is scheduled for team interaction in both educational and social modes. Professionals arrive at the end of the two-week orientation period and three days later, the teams depart for the campos. Three days are provided for orientation and integration of the professionals into their assigned groups. This situation greatly improves team functioning.

Since student participants have been in the country for two weeks and have spent one weekend within the confines of their assigned campo, they assume the leadership role and provide orientation to the newly arrived professionals. This situation has resulted in an equality of status between students and professionals due to the unequal knowledge base. This equality is carried into the clinic setting. Ultimate authority is vested in the coordinator of the group, a non-health care professional/student who possesses fluent language skills and responsibility for the logistics of the experience and the safety of the participants (not unlike a hospital administrator or fiscal manager). The coordinator is chosen in December by program administrators after a similar selection process.

During the following two weeks of health care delivery, the team eats, works, and solves problems together. The group is formed into an efficient team through this daily face-to-face interaction (living working, and socializing together). Environmental adversity, cultural dissonance, and generalized frustration lead to a cohesiveness that is uncharacteristic of most health care teams. In some cases, a bond is formed which time and distance cannot undo.

In each new case or project, authority for health care services is shared according to expertise. The perception of status remains one of equality.

Within this student experience, each profession is deemed equally important and the skills of each, complementary. Problem formulation and problem solving are done jointly among the medical, nursing, and pharmacy students. The dental student relies on the medical and nursing students for assessment and referral. Continuous consultation among the student/professional participants allows for a truly integrated approach to health care.

Personal and team limits become well known within the first two days of functioning. The cooperation necessary to initiate a half-day clinic, develop a routine, and establish an efficient operation promotes a continued team relationship. The students discover they function interdependently quite well (out of necessity). They grow to rely on one another as mutual respect and trust are fostered within such an environment. Coordinators receive special schooling on group dynamics to facilitate this experience.

Home visits are accomplished by an "explorer team" mix of students and professionals. The students/professionals divide themselves into a four-person group and visit their Dominican neighbors in a culturally determined, socially acceptable manner. These visits are mainly social in nature and done at the request of the home owner. Screening and referral are also accomplished, as is acute care when necessary.

None of the activities are structured or specified. How the objectives of the program are to be accomplished is only speculative. Half-day clinics and home visits are encouraged, and provide the only structure afforded the group. There are a few rules rigidly held in the "campo" setting: no alcoholic beverages; no performance of activities not previously practiced (or learned) in the United States; no provision of health care by non-health related persons (no harm shall be done to our hosts); and professionals must always remember the emphasis is on the student's experience.

"Reflection" meetings are held frequently to discuss the activities of the day, make plans for the next day(s), and devise new, improved modes of functioning. These after-dinner meetings provide for important regrouping and a restoration of the common goals of the group. A team journal is kept and the recording of daily activities is passed among group members. Difficulties are discussed, problems are solved, conflicts are resolved, and group decisions are made. Praise is given for work well done and special moments remembered during these meetings. Everyone's contribution is realized during the reflections (not unlike a team conference). These meetings and the continual face-to-face exchange between the members serve to validate the team's work and reinforce the achievement of the program (and the individual's) objectives.

Implications for Education

The unique nature of the program affords success for the health care team concept. The setting is one of a Third World country with its accompanying material poverty. This environment affords an experience of major cultural dissonance. The material differences between the North Americans and the Dominicans make possible a corresponding difference in the functioning of the health care team. What is routine in the States is ineffective in this setting. What is "myth" within the health care team concept becomes reality. Previous experiences in the States also appear incongruent in this new setting. There is no inequality among health care providers. There is no assumed status or proven authority. Interdependence, equality, and autonomy reign in this situation. (Students are left during the last two weeks of the experience with only one professional per team, usually a nurse.) Common problems with misinterpretation of the language, symbols, and customs of the country also facilitate the concept of a collaborative team effort. A gradual discovery of the expectations of the Dominicans for the program enables the team to focus their activities on meeting those expectations.

In this setting, the entire team takes responsibility for the outcome of the health care. All participants are accountable for the quality of care and satisfaction of the client. From initial interview through follow-up and reevaluation, the complementary knowledge, skills, and expertise of the team members support a successful outcome. Within this setting, it appears unlikely that the outcome would be as effective if only individual disciplines were responsible for the care.

We find our students as well as our veteran professionals possess many of the following characteristics: open-mindedness, flexibility, tolerance for frustration, commitment, integrity, personal and professional security, are client-oriented, have Christian values, and are true adventurers. These characteristics have proven valuable in a successful client/participant experience. How these characteristics contribute to success can only be speculative, at most.

The experience is an intensely personal event that provides the individual with a truly humanizing approach to health care and enacts the true meaning of the concept of the health care team.

The experience allows for a third type of enculturation. Students and professionals alike come with not only their own ethnocentric views, but with their professional baggage. I.L.A.C., through its transcultural experience, enables the participant to realize a different model of disease, health beliefs and practices, and health care delivery.

Initiation, formation, maintenance, and evaluation of the health care team is a process that must be carefully nurtured if the team concept is to survive and grow. This program has discovered a successful format for this nurturance. It is hoped that some of the ideas described here can allow others this same success.

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NUTRITION/FEEDING CLINIC: INTEGRATING THE PROFESSIONAL STUDENT

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Introduction

The Nutrition/Feeding Clinic provides training in interdisciplinary approach to problem solving in the area of feeding. Because the feeding process has many psychosocial and nutritional implications, the optimal approach to assessment and management requires the integration of expertise in a number of areas including the mechanics and skill of feeding/eating, the behaviors that surround feeding and eating, and the nutritional adequacy of the diet.

The purpose of this presentation is twofold. An interdisciplinary approach to feeding problems will be discussed. Then our approach to integrating students into the clinic will be presented. To accomplish these purposes, a videotape that describes the Nutrition/Feeding Clinic will be shown, the University Affiliated Facility and its philosophy will be discussed, and student integration into Nutrition Clinic will be described.

The Nutrition/Feeding Clinic

Nutrition/Feeding Clinic has two purposes: training of students and service to clients. Faculty from the disciplines of nursing, nutrition, physical therapy, dental hygiene, psychology, and medicine supervise and coordinate the clinical activities for students. Students from these as well as other disciplines participate in the clinic. Arrangements can be made for observations, consultations, or regular participation by faculty or students from other disciplines.

The clinic is held two times weekly. Clients of all ages may be seen, although primarily young children are referred. Once a referral is accepted, the primary caregiver and appropriate community professionals are invited to accompany the client to the clinic for the evaluation. The evaluations routinely include consideration of the following areas: (1) specific indications of nutritional status; (2) adequacy and appropriateness of dietary intake; (3) postural control and motor development; (4) feeding skills; (5) physical health; (6) psychosocial and socioeconomic considerations; and (7) availability of community resources.

Each client evaluation is conducted by a team of faculty and students whose members represent the participating disciplines. One person is designated as a case manager. This person is responsible for hostessing the client through the clinic. The clinic visit includes interview of parents, appropriate anthropometric measurement, and observation of a feeding.

Interdisciplinary reports are generated by the team and written by the case manager. Copies are provided to the family and other parties designated by the family. Clients are followed in the Nutrition/Feeding Clinic until services are no longer needed or service can be provided by another agency.

For participation in the clinic, students are provided with the opportunity to apply disciplinary expertise and increase their understanding of other disciplines. They are able to learn basic skills that have been traditionally confined primarily to other disciplines and to increase their skill in functioning as a member of an interdisciplinary assessment and management team.

The University Affiliated Facility

It is important to discuss the University Affiliated Facility (UAF) because these facilities support the practices of interdisciplinary education and practice. The Nutrition/Feeding Clinic would not survive without the support of its parent agency, the Nisonger Center.

UAFs were created during the Kennedy administration and funded by the Division of Maternal Child Health to provide graduate interdisciplinary education for the next generation of professionals. UAFs are mandated to provide service to clients, provide community education, and do clinical research in the area of mental retardation and developmental disabilities (MR/DD). Nutrition/Feeding is a logical interdisciplinary problem in the area of MR/DD because it is many faceted.

Nutrition/Feeding Clinics have flourished in interdisciplinary settings such as Nisonger Center due to the fact that many disciplines deal with growth and developing mature feeding patterns. On the negative side, professionals of one discipline often assume that professionals of another discipline are dealing with feeding and no one is held accountable for assessment of growth and feeding. It is logical, therefore, to provide a clinic where nutrition and related feeding problems are looked at systematically. In such settings, it is assumed that there is more than one path to the desired outcome. The interdisciplinary clinic provides a setting where client recommendations can be coordinated.

Students in Interdisciplinary Clinics

Students in a variety of disciplines can receive many benefits from participating in the Nutrition/Feeding clinic. Students are encouraged to participate in a team setting that is not health-care oriented. The clinic encourages interaction between disciplines who do not normally work together. Students learn that group process can be an important aspect of practice. They also learn the skills they will need to become case managers. They are also able to learn basic skills that have been confined primarily to other disciplines.

There are decisions that the interdisciplinary team faculty needed to make in order to accommodate students. Some procedures and roles within the group needed to be standardized. Nisonger faculty prepared a role description for the case manager, standardized the information needed from the phone interview with the client's family, and began using a standard format for case reports. (See Appendix A.) The faculty identified a common knowledge base needed by all students participating in the Nutrition/Feeding Clinic. We then identified educational materials for the students at each level. Each faculty member then identified discipline-specific materials for students from their discipline.

The issue of student recruitment must be continually considered by faculty. Each discipline has curriculum and time constraints within it which must work. The team must show some flexibility in providing clinical experience. A student who agrees to participate in the Nutrition/Feeding Clinic works first with the faculty member from this discipline. When the student is comfortable with the discipline role, he is assigned a case to manage through the team.

Conclusion

The purpose of this discussion has been to introduce the Nisonger Center's Nutrition/Feeding Clinic, to you and to describe some consideration we made as we integrated students into the team process. We find that students keep our team alive and growing. Their input into the group keeps us from becoming complacent. We hope that our approach to students can help you in your endeavors.

Appendix A

Nutrition/Feeding Clinic
Checklist for Case Manager

Client: ______________________________
Clinic Date: ______________________________
Case Manager: ______________________________

BEFORE PRECLINIC

_____Present a brief summary at planning conference 7-10 days prior to presentation at preclinic conference. Receive input from faculty and students regarding specific information needs.
_____Conduct telephone interview. (See Phone Interview Outline.)
_____Record pertinent information in progress notes.
_____Organize information for presentation at preclinic conference.
_____See that available height/length and weight data are recorded on growth chart.

DURING PRECLINIC

_____Bring client chart and conduct planning conference.
_____Formulate list of additional information to be obtained before clinic day.

BEFORE CLINIC

_____Contact appropriate individuals to obtain desired additional information.
_____Contact and obtain commitment from discipline consultants necessary to the assessment.
_____Prepare list of any persons/agencies to be added to consent/release forms.
_____See that appropriate food and equipment are available for feeding session.

MORNING OF CLINIC DAY

_____Check with nutritionist regarding equipment in 302, if the client has any special needs.
_____Arrange room 116 to accommodate those in attendance.

DURING CLINIC

_____Bring client to clinic.
_____Present 5-10 minute summary of evaluation plan. (See Guidelines.)
_____Have consent forms signed/updated.
_____Ask parent where copies of report should be sent.
_____Introduce client/family to everyone involved.
_____Lead team in conducting session according to planned schedule.

AFTER CLINIC

_____At post-clinic conference, lead team in discussion of impressions/conclusions, and formulate prioritized list of recommendations.
_____On routing slip, record dates on which discipline reports are received.
_____Prepare interdisciplinary report. (See Format and Guidelines.)
_____Coordinate follow-up service.
_____Within one week following the post-clinic conference, call the family to inquire how things are going, to inform them of additional recommendations and status of follow-up.

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NUTRITION/FEEDING CLINIC PHONE INTERVIEW GUIDELINES

There are three basic purposes to the phone interview and they are listed as follows: An updated picture of the client is developed, the case manager begins the relationship with the caregiver and other professionals interested in the client, and the case manager gives those individuals coming to Nutrition/Feeding Clinic an idea of what to expect from their experience.

An outline of the information which the case manager should collect is offered below. This outline suggests area of inquiry. Additional information may be pursued if in the judgment of the case manager the information will assist the team in understanding the feeding and nutrition problem(s).

Prior to the phone interview, the case manager should contact each discipline seeing the client to identify special considerations of that discipline. Time for this will be provided at the clinic conference on Wednesday. Should this contact not be possibly for some reason, ask the family to bring a 4-day intake record and food to feed the child.

Each phone call should start with an introduction of the caller to the caregiver. Briefly describe the purpose of the call. At some point during the call, the purpose of the Nutrition/Feeding Clinic will be described. Be sure to include the following:

1. The disciplines involved
2. Student involvement
3. When and where to arrive (e.g., 11:15 a.m. in Clinic Office)
4. Weight and measurement will be taken
5. Interview of caregivers and professionals will take place
6. Feeding
7. Closure at 12:45

Ask the family to bring the following:

1. Growth data (e.g., baby book or health records)
2. Adaptive equipment used for feeding the child at home
3. Medications or vitamins being taken by client

Outline of information to be obtained in phone interview:

Name:
Birthdate:
Parents' names:

I. Referral/Chief Concerns

1. Why was client referred
2. What are the problems encountered

II. Data

Age:
Sex:
Most recent height and weight and date taken:
Medication:
Allergies:
Health History:
A. Health problems associated with feeding or nutrition problem
B. Recent health problems

Feeding Problem:
A. Problems that have been identified
B. Appetite

Current Diet:
A. Type of food (commercial, table food)

Feeding at home:
A. Who are the primary feeders
B. How is the child fed:
   1. position or special seating arrangements
   2. special equipment

Dental History:
A. When teeth erupted
B. Present number of teeth
C. Professional dental care
D. Problems

Community Resources:
A. Places and persons who are dealing with feeding or nutrition
B. Parental permission to contact these resources

Care needs to be given to collecting information from all available resources. If the client is referred from one of Nisonger Center Interdisciplinary Teams, the case manager works with the team leader to get the needed information and establish necessary contacts. Referrals from other sources should be contacted directly. Be alert to similarities and differences in perception(s) of the client's feeding and nutritional problems.

THE OHIO STATE UNIVERSITY
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FORMAT AND GUIDELINES FOR NUTRITION/FEEDING CLINIC REPORTS

Reports and records are vehicles for communicating information pertinent to treatment or management of the client.

In keeping with Nisonger Center policy, the Nutrition/Feeding Clinic Reports will be written in such a manner that information pertinent to the feeding experience is objectively and completely communicated in a style that enables the report to be shared with the client's parents, community agencies, and professional individuals.

NAME:	PARENTS:
BIRTHDATE:	DATE OF EXAM:
CASE #:	EXAMINERS:

NUTRITION/FEEDING REPORT

I. Referral/Chief Concern

A. First Clinic Visit - three statements should appear here:
   1. Name of person(s) referring the client, and relationship to the client
   2. Statement of who accompanied client to clinic
   3. Chief nutrition and feeding concerns of referral source and/or person(s) accompanying the client

B. Follow-up Visit - the following information should appear here:
   1. Date of previous clinic visit
   2. Reasons for follow-up
   3. Statement of who accompanied client

II. Data

A. Identifying Information
   1. Age
   2. Sex
   3. Anthropometric Measurements: % National Center of Health Statistics Reference Data

      Height (length):
      Weight:
      Tricep skinfold:
      Subscapular skinfold:
      Mid-upper arm circumference:
      Head circumference:

	Mom	Dad	Reported	Measured
Height:				
Weight:				

4. Biochemical Indices
5. Medications
6. Nutrient Supplement
7. Allergies
    - Drug
    - Food
    - Other
    - Evidence

B. Health History
1. Pregnancy
2. Labor and delivery
3. Discovery of developmental problem(s)

When	What Done	Results

C. Review of Systems
1. Skin
2. Eyes
3. Ears
4. Throat
5. Heart
6. Breathing/lungs
7. Eating/digesting food
8. Liver
9. Kidney/bladder
10. Nerves
11. Bones
12. Medical diagnoses made and by whom

D. Physical Exam

E. History of Feeding Problem

When and What	What Done	Results

F. Diet
1. Pertinent historical information
2. Current diet

G. Growth History

H. Feeding at home
1. Who
2. Hunger cues
3. Satiation cues
4. Special equipment

I. Dental History

J. Community Resources

Service	Contact Person

K. Family History
1. Persons residing in household - ages and time constraints
2. Primary caregiver
3. Others who feed
4. Others who give care

5. Family schedule - during the week and the weekend
6. Economic support of the family

L. Observation During Feeding
  1. Caregiver sensitivity
  2. Caregiver response to distress
  3. Growth fostering
  4. Clarity of cues
  5. Responsiveness to parent
  6. Oral motor functioning
  7. Positioning, muscle tone, and movement pattern
  8. Sensory processing including response to particular foods and tactile defensiveness
  9. Self-feeding skills
  10. Behavior

III. Impressions/Conclusions

Summarize the most outstanding impressions obtained through analysis of data, being sure to include strengths. Identify problems in the following areas:

1. Growth, current size
2. Nutritional status, nutritional needs
3. Adequacy of intake
4. Feeding skill on part of parent and/or child
5. Physical health
6. Dental health
7. Resource availability, both individual and community

IV. Recommendations

INTRODUCTION

INTERPROFESSIONAL EDUCATION IN CLINICAL SPECIALTY AREAS

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The integration of education and service is a challenge increasing in intensity for both sectors. With concern for cost containment and changes in patterns of delivery, the traditional modes of clinical or practice education are being eroded. Developing innovative approaches to this phase of education when the structure is interdisciplinary is an even greater challenge.

The first paper describes the development of an on-campus clinic that can provide a model of interdisciplinary team care and integrate theory and practice. This model was developed as a response to not only a need for an adult neurogenic service, but a need for a model of practice that serves the educational objective of developing teams.

The second paper describes an educational program that was developed out of the need for a medical specialty, behavioral pediatrics that has a multidisciplinary theoretical base. A component of this program was the creation of practicum sites to apply the theoretical knowledge, again demonstrating the need for the laboratory for learning.

The third paper focuses on a program to meet a resource need for geriatric services. The approach hypothesizes that there are barriers preventing health professionals from pursuing a specialty with the elderly. This program provides consultation and resources to strengthen the traditional academic courses and to design a clinical experience, both directed to minimize the barriers for a career choice.

The final paper describes the development of service opportunities in the area of health education and health promotion for the elderly to apply the concepts of the development of a "team player." An emphasis on the epistomological base for the service was presented.

In summary, each experience arose from the need for a laboratory to prepare human resources where client needs require a multi- or interdisciplinary approach. Development of these models also provides a service, whether or not this was a primary or secondary mission. More importantly, they all recognize the importance of synthesizing theory and practice and applying the synthesis to complex health problems. Consistent with the theory of the learning cycle described by Kolb, et al,* the approach requires both abstract and concrete approaches, experiential and reflective analysis for long lasting learning.

*Kolb, D.A. Individual Learning Styles and the Learning Process. Sloan School Working Paper. Cambridge, MA: Massachusetts Institute of Technology, 1971, 537-571.

THE INTERDISCIPLINARY ADULT NEUROGENIC CLINIC:
A PILOT PROJECT

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The Interdisciplinary Adult Neurogenic Clinic was a pilot program at the University of Wisconsin-Milwaukee to assess the feasibility and efficacy of providing university-based integrated clinical practicum experience to students enrolled in four School of Allied Health Professions curricula and the School of Social Welfare.

Traditionally, allied health pre-professional students have been trained in either a discipline-specific university setting without benefit of interdisciplinary knowledge and cooperation, or in a community-based institutional setting for which students are unprepared to work in a health care team. Upon employment, the allied health professional must then learn the terminology and working precepts of their rehabilitative colleagues.

This program was based on the professional conviction that people expected to function in an interdisciplinary environment would be better able to do so if educated according to an interdisciplinary model. The pilot study addressed the university mission of education, research, and service; it provided an opportunity to integrate theory with practice, demonstrated to allied health students that both basic and applied research evolves from and contributes to clinical practice, and provided care for individuals deprived of needed rehabilitative services because of changes in current health care service delivery systems.

Historically, only the Department of Speech Pathology and Audiology (SPA) had provided clinic service to adult neurogenic patients as part of its on-campus clinical practicum for graduate students prior to their entering off-campus medical placement. Department faculty as well as medical placement supervisors were encouraging increased education in health care team operations, interdisciplinary terminology, and treatment planning. Contact by SPA was made with the occupational therapy department at UWM to begin planning some type of integrated clinical education while serving the patients already available.

The Occupational Therapy Program had been concerned with Level I field placement (first clinical experience) for some time. The Wisconsin Council on Education (Wiscouncil) surveyed 169 occupational therapy clinicians and educators in Wisconsin since the fall of 1982 to examine problems encountered in implementing Level I field work at both the technical and professional levels. The project was extended to look at Level I field work issues nationwide. Strong concern was expressed over cost effectiveness and accountability of Level I programs. Some clinics in Wisconsin had eliminated Level I programs due to concern over cost. The same has happened nationwide (Leonardelli and Caruso, 1986). The Occupational Therapy Program within the School of Allied Health professions at the University of Wisconsin-Milwaukee consequently began considering the potential of an on-campus Level I placement for some of its students.

Medical trends also signify change and growth within the university-based clinical education programs. Numerous acute care and some rehabilitation settings were realigning individual departments into single interdisciplinary entities with coordinated patient care under the management of one professional.

The changes and increased competition among hospitals since implementation of the Medical Prospective Payment System (MPPS) were also affecting on-site clinical education of students in allied health professions. Hospitals were forced to look at all programs in terms of productivity and cost effectiveness (Scott, 1984). There was a question of the amount of time field placement supervisors had to individually orient and train student clinicians. Kautzman (1986) surveyed twenty-one occupational therapy directors in Wisconsin acute care hospitals regarding six different aspects of Level II student occupational therapy field work placement concerns. Six of the respondents or 28 percent indicated the amount of time spent by supervisors with students had changed and was directly related to the implementation of MPPS. The same number of centers acknowledged that they would accept fewer occupational therapy Level II students as a result of implementation of MPPS. This trend was seen in other allied health student placements as well.

As a result of the concerns stated above, the need for an on-campus clinical experience early in preprofessional training for all allied health students seemed inevitable. The Interdisciplinary Adult Neurogenic Clinic at the University of Wisconsin-Milwaukee was then formed as a pilot project based on the belief that an interdisciplinary educational model, rather than a discipline-specific or multi-disciplinary model is the true "health team approach" and, as such, is reality based in the delivery of health care. For the inter-disciplinary model, the major emphasis for students from several disciplines is showing some joint responsibility for a task that requires mutual cooperation to achieve a stated goal.

According to R.B. Fox (date unknown), there are five generic models of interdisciplinary education. Our Interdisciplinary Adult Neurogenic Clinic could be described as a patient care team approach and can be further defined as a patient orientation model. The patient orientation model employs the health team approach by focusing on patient and family needs and incorporating the necessary disciplines as the time arises.

The clinic provided rehabilitation services to eight neurogenically impaired adults from the Greater Milwaukee area. Seven clients presented stroke histories and showed potential for further progress in rehabilitation (or had interest in additional therapy) but were no longer covered by third-party medical insurers. The eighth client was approximately one year post-closed head injury and was in an interim stage between rehabilitation services.

Student participants and faculty in the Interdisciplinary Adult Neurogenic Clinic came from the Schools of Allied Health Professions and Social Welfare at the University of Wisconsin-Milwaukee. Within those schools, students represented four departments/programs as follows:

Medical Record Administration Program - two undergraduate students

Occupational Therapy Program - four undergraduate students
Speech Pathology and Audiology Department - four graduate students
School of Social Welfare - four graduate students

In addition, the Therapeutic Recreation Program participated on a demonstration basis.

Of the fourteen student participants, approximately half could be described as "traditional" college students, coming directly from high schools and following full-time professional curricula at either undergraduate or graduate levels. Most of those students also held part-time jobs. An additional two students were employed full time in school settings and came to UWM for summer training to update skills for future occupational changes. The remaining students sought this unique experience as a contribution to part-time education at UWM. All but the social welfare students received academic credit for the experience. The project met clinical course requirements for both the speech and occupational therapy members and counted toward client contact hours for social welfare students. The medical record administration students enrolled on an elective basis.

Faculty for the clinic came from the same curricular backgrounds as the students with the addition of the Project Director from the Department of Health Sciences. The faculty's role in this experiential model of education required some revisions in teaching techniques, as they served more as facilitators, resource persons, and clinical role models than as traditional academic educators.

Faculty clinic planning began early in 1986 with the clinic itself scheduled for a six-week summer session beginning in late June and terminating in early August 1986. Three weeks prior to clinic initiation, student activities began with client record forms developed by the medical record administration students. The following thirteen forms were designed by those individuals, with nine forms actually introduced during the summer session (as noted with an asterisk):

Problem list*
Patient identification*
Authorization to videotape/tape/photograph*
History*
Request for physician's orders
Interdisciplinary care plan*
Interdisciplinary care plan update
Progress note*
Case conference summary
Communication record*
Interdisciplinary patient status report
Interdisciplinary discharge summary*
Interdisciplinary discharge summary (continuation)*

Discipline-specific client evaluation tools were pulled from other resources for use during the pilot. A Consent for Treatment, a Physician Participation Authorization, and an Informed Consent for Disclosure of Patient Health Care Information were also initiated as designed by the Medical Record Administration Faculty Coordinator. All documentation was designed to follow an interdisciplinary/problem-oriented format.

The clinic was organized in the following manner. Each senior occupational therapy student was teamed with a graduate speech pathology student. The eight clients were assigned to an OT/Speech team, with each team responsible for two clients. The clients received at least four hours of service per week, with the clinic functioning for three hours per day on Mondays and Thursdays. The weekly schedule was as follows for each OT/Speech team: Monday, during the first hour, client #1 received service from a speech student with an OT student observing. The second hour, patient #1 received OT services with patient #2 receiving speech service. The third hour, OT provided services for patient #2 with the speech student observing. On Thursdays, this pattern was reversed in order that each student had an opportunity to both observe and work with each patient on a one-to-one basis. Social work and medical record administration students also observed therapies regularly.

Occupational therapy students concentrated on thorough evaluations of their patients during the six-week period. Areas of evaluation included: active and passive range of motion, sensory, functional muscle, perceptual, and dexterity testing. Activities of daily living, homemaker skills, community living skills, leisure skills, and life-style evaluations were also done as a part of an independent living assessment. A home evaluation was performed during a home visit. Each student was expected to develop a treatment plan with long- and short-term goals based on the results of their evaluations and to design a home program for each client for follow-up purposes.

Speech and language pathology students evaluated patients during the first few sessions for aphasia, dysarthria, verbal apraxia, and/or cognitive disorders basing their choice of a diagnostic battery on presenting symptoms and medical and case history information. Long- and short-term treatment objectives were individually established with therapy immediately implemented. Family members were encouraged to observe therapy and were consulted weekly regarding follow-through of home assignments.

Social welfare students met with the clients on an appointment basis either on campus or in the client's home. Family members were encouraged to participate. Narrative documentation of the family therapy was included in the client's record. The student therapists used the Brief Family Therapy model (Watzlawick, 1974) in working with families. Six- to eight-week sessions are the maximum recommended when using the Brief Family Therapy model, as it uses a family-systems approach. Therapy was done in rooms with two-way mirrors and was also videotaped so that OT and speech students were able to either observe sessions simultaneously or later on tape. Additionally, descriptive data were collected on the patients and their spouses using the following instruments: Family Adaptability and Cohesion Scale (Olson, 1979); Marital Comparison Level Index (Sabatelli, 1984); Equity Instrument (Walster, 1975); Communication between Mates (Fitzpatrick, 1984); and Locus of Control Instrument (Rotter, 1966).

The OT and speech students jointly identified client problems and their discipline-specific treatment plans were incorporated into an interdisciplinary plan following the problem-oriented system. The students were also required to write daily progress notes on each patient according to the SOAP format. At the end of the pilot clinic, the OT/Speech team jointly counseled the patients and their families regarding progress and recommendations.

Other contributions by the medical record administration students included development and distribution of policies and procedures on client record security and charge out, client information confidentiality and release of information, correction of the client record, abbreviations, and sequencing of the content of discharged client records. Quality assurance for the record system was addressed through both quantitative and qualitative record review performed on a weekly basis by this group. Indexing of all clients, diagnostic coding and recommendations on future statistics and registers were also accomplished.

Tuesday clinic meetings were reserved for inservice training and team planning sessions for patient treatment. In addition to interdisciplinary planning and coordination, students prepared and presented discussions of aphasia, verbal apraxia and dysarthria (speech); occupational therapy roles and functions (OT); problem-oriented recording and medical record administration roles and functions (medical record administration). The Faculty Coordinator from social welfare described the family therapy process and provided a clinic client-family videotape as an example. An adapted aquatics demonstration involving volunteer clients and students was also provided by the Recreational Therapy Faculty Coordinator. Hospital-simulated patient staffings by OT and speech students concluded the summer session summarizing client histories, assessments, and therapy accomplished.

Evaluation

It is imperative that constant evaluation of interdisciplinary programs be undertaken so that weaknesses become apparent as the programs grow. Provision for change through evaluation should be an integral concept of all interdisciplinary programs regardless of the model used.

Evaluation of the pilot project for the Interdisciplinary Adult Neurogenic Clinic was focused in two areas: (1) Program concept, in which subjective data were collected from everyone involved--patients, students, and faculty; and (2) Knowledge gained, in which objective data were collected on both factual and attitudinal knowledge.

Program Concept

In relation to the program concept, patients, students, and faculty were asked to complete separately designed questionnaires.

Patient Evaluations. The patient evaluation consisted of five yes/no response items with opportunity for commentary on each response, as well as three open-ended questions. Of the eight patients served by the clinic, five individuals returned their questionnaires. The first three questions on the instrument were as follows:

> "Was it important to you to have both occupational therapy and speech services offered?"

"Were you satisfied with the therapy services provided?"
"Did you receive sufficient feedback concerning the nature of your therapy and progress?"

The first three questions were responded to affirmatively by 100 percent of the patients who returned the questionnaire. Subjective comments related to these questions pertained to the need for continual treatment and additional therapies, e.g., physical therapy. One comment was particularly satisfying: " . . . it is the best program that I have had since I've had my stroke. It is a more involved program than anything at . . . " (a tertiary-level rehabilitation was named).

Seventy-five percent of the respondents answered yes to the fourth question: "Did you enjoy the swimming demonstration put on by Recreational Therapy?" The reason for the lower percentage of responses for this question is that some of the patients were not available for the applied aquatics demonstration.

Seventy-five percent of the respondents replied "yes" to the fifth question: "For those of you who participated with the social workers, did you find their services important to you?" Several patients did not respond, as they did not choose the family therapy component.

The three open-ended questions were:
"What was the most important part of the interdisciplinary clinic to you?"
"What would you like to see improved in our clinical program?"
"Any additional comments?"

General comments included such areas as occupational therapy as the most important discipline, would have liked a program longer than six weeks, would have liked a group session, but most of all it should be held "more and oftener." The reason for the preference of occupational therapy was specifically stated: " . . . because the work with my hand was more extensive than anything I've had to this point."

An overall summary of the patient evaluations demonstrated a thoroughly positive and helpful experience for those involved.

Student Evaluations. The undergraduate and graduate students in this pilot project were given a nine-item evaluation. Six questions were open ended, two questions had a five-item Likert scale, and one question was multiple choice. Of the fourteen students who participated in the project, 71 percent (10) returned the questionnaires. The social work students have not turned in their evaluations as yet.

The first question was: "What was the most important part of the interdisciplinary clinic for you? Why?" There was considerable uniformity in responses to this question. Students felt that the interaction between all disciplines was most beneficial, that the simulation of a job setting was helpful, that the "hands-on" approach was highly conducive to retention of content learned, and it provided the students with more confidence in a supportive atmosphere rather than in a hospital environment.

Students were asked: "What would you like to learn if you had more time with the clinic?" Several students expressed an interest in more specific treatment techniques and the role of occupational therapists beyond that of evaluation, which was all students had time for this summer. One student commented that " . . . (she) would like to interact with the disciplines even more. (She) would like the process to include more feedback to the other professionals. (She) would like to have a form designed to document record deficiencies."

The third open-ended question was: "What would you improve in this clinical experience?" Students recommended that a group session be offered for the patients, similar to the group sessions held each semester in the Speech and Language Clinic. Students were able to identify additional topics of interest for the inservice programs, e.g., reimbursement systems, DRGs, and factors that influence the length of treatment in acute care facilities. Students would have liked more time in all aspects of the clinic including orientation, briefing on the patients and their families, actual evaluation, and treatment of patients. Students suggested improvement in the area of interaction between the social work students and other disciplines, as well as an introduction of recreational therapy earlier in the program.

Students were asked: "What would you eliminate from this clinic experience?" Other than reordering the inservice topics, students recommended eliminating nothing from the clinic experience.

The fifth open-ended question was: "Did the interdisciplinary clinic experience meet your expectations? Why or why not?" As a group, the students responded that not only were their expectations met, but their expectations were exceeded. One student reaction was " . . . it turned out to be better than I ever imagined. I expected to observe and help our supervisors evaluate and treat patients, not to do it myself. I also didn't realize what an excellent opportunity we would have to see speech and social work or understand medical records people." Another student reaction was: "I did get a chance to work with 'real patients.' I felt the supervisor provided me with excellent feedback as to how I was doing in therapy and encouragement. All of the supervisors in the other departments were supportive and willing to help. It was beneficial to learn about other departments."

The final open-ended question was: "If it were offered again, would you recommend the interdisciplinary clinic experience to other students? Why or why not?" The unanimous reaction to the question was "yes." One student's comment sums up the reactions of all the students: "It really bridges the gap between the classroom and the real world, gives self-confidence, and allows for interaction, understanding, and information about other professions that would not likely be gained otherwise."

Students were asked: "If the interdisciplinary clinic concept were expanded to other interdisciplinary course offerings, what topics would you feel are appropriate?" Students consistently named: documentation and the problem-oriented medical record, medical terminology including discipline-specific terms, neurology, reimbursement systems, and the therapist's role in an acute care facility, and psychopathology as possible topics.

An overall summary of the student experience in the pilot program can be summarized by one student's comment: "This class would be an excellent educational and emotional benefit to anyone! It gives experiences that cannot be gained in any other class/area during a student's education."

Faculty Evaluation. The faculty were provided with an evaluation form that consisted of open-ended questions and one Likert item. Of the five faculty who participated in the program, four evaluations were returned in time to be analyzed.

Faculty were asked to describe their role in the clinic during the pilot program. They described their role as supervisor or coordinator for the students and as a resource on discipline-specific issues. Three of the four faculty indicated that they understood their responsibilities, but one individual felt the responsibilities were greater than anticipated. Two of the three faculty felt satisfied with their role in the clinic. The individual who was not satisfied, stated that he did not adequately prepare himself or the students for effective, collaborative activities. All four individuals indicated that they would like to continue with their role in the clinic.

Faculty were asked to identify what they would change in the program. Most suggestions related to planning, scheduling, and the addition of more time for themselves as well as the students. Faculty were also asked what they would like to retain in the program. The comments were similar in relation to not only retaining what was done, but to develop and enhance the program further. One faculty member summed it up: "retain . . . all that we started--thought we organized well for the first time around!"

Faculty were asked to rate five aspects of the clinic using a five-point Likert scale with 5 = very beneficial and 1 = not beneficial. The mean ratings were as follows:

		Mean	N
1.	Inservice sessions	5.0	4
2.	Case presentations	5.0	3
3.	Interaction with other professions	4.5	4
4.	Opportunity to observe other faculty	4.3	4
5.	Schedule coordination	3.8	4

Based on the ratings of the operation of the clinic, faculty were asked to describe the strengths and weaknesses of the clinic. Faculty described strengths as "teamwork" both on the part of faculty and students. The interaction between levels and disciplines of students was positive. The enthusiasm and cooperative attitude of faculty promoted the interaction between those involved.

Consensus was obtained regarding the weaknesses of the program. More time for planning, orientation, and implementation would have eliminated the "small problems" we had. Better communication with the Social Work Program would have further enhanced the interdisciplinary component.

Faculty were asked whether the clinic experience met their expectations. In unison with the students' reactions, faculty agreed that expectations were not only met, but were far exceeded. When asked whether faculty would recommend this experience again for their students, the unanimous response was "yes." One faculty member added, ". . . live sessions are invaluable for teaching purposes."

Faculty responses were mixed when asked whether they would continue to commit themselves to interdisciplinary education either with/without funding. The majority of responses reflected a commitment to the integrated educational approach regardless of funding. One faculty member saw the first step toward this endeavor as collaboration on at least one course in common.

When asked what other disciplines should be included in the program, the most frequent responses were vocational rehabilitation/ counseling, psychology, nursing, and recreational therapy on a continuous basis. Additional comments were related to the expansion of clinic services to include children and a wider range of diagnoses.

In summary, the faculty in the clinic enjoyed the implementation and outcomes of the pilot project. As one faculty member stated: "All three areas, i.e., education, research, and service have unlimited possibilities for development . . . "

Knowledge Gained

In relation to knowledge gained, data on both factual knowledge and attitudinal knowledge were obtained. The Neurogenic Impairment Opinion Survey (NIOS) was developed to measure students' knowledge of neurogenic impairment in adults. NIOS consisted of 24 yes/no items which were used to discriminate facts from myths regarding the abilities of neurogenically impaired adults. NIOS was administered to students both before and after the clinic experience. A matched-pair t-test was done for the pre/post tests. There was no statistical difference between the tests ($_M$ =29.1, $_M$ = 31.8, p.   .24), although there was a slight tendency toward an increase in knowledge. Reliability of the NIOS was Alpha = .72 using the Split model. The power of the test was reduced due to the small sample.

The Medical Attitudes Test (MAT) was developed to measure students' attitudes toward allied health professionals in the health care delivery system. The MAT is a 23-item multiple-choice instrument which allows students to differentiate between the role of allied health professionals in primary and tertiary levels of health care. Additionally, students are asked to determine how closely they would work with a patient's family in providing therapeutic services.

The MAT was administered to students both before and after the clinic experience. A matched-pair t-test was done for the pre/post tests. There was no statistical difference between the tests $M = 343.3$, $M = 344.3$, $p < .90$). Reliability for the MAT was Alpha = .72 using the test-retest model. As stated before, the power of the test is diminished due to the small sample.

There was significant correlation ($r = .47$, $p < 04$) between the NIOS and MAT, but significant correlations between such variables are expected to arise as artifacts.

The usefulness of the NIOS and the MAT is unknown at this time. To improve the reliability of the instruments, larger samples are needed and the period of time between the pre/post test sessions needs to be lengthened. Data will be collected on students Fall semester 1986 in which there will be a fifteen-week interim between testing.

The subjective and objective data analyzed from the pilot project are but a small contribution to understanding the complexities of an interdisciplinary endeavor. It has become apparent, though, that evaluation is an integral component in enhancing the development and quality of collaborative education.

The pilot project was an interdisciplinary clinical educational experience. If this model of clinical education is to reach its full potential, an integrated academic curriculum needs to be developed prior to the implementation of clinical services.

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INTERDISCIPLINARY DEVELOPMENT OF A CURRICULUM IN BEHAVIORAL PEDIATRICS

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The area of behavioral pediatrics is one which recent graduates of residency programs feel is poorly covered during their training. In a recent survey of behavioral pediatrics training in residency programs, the major obstacles to development or expansion of behavioral pediatric education was a lack of money and a lack of appropriately trained faculty. Department chairmen report an inability to identify faculty members qualified to teach behavioral aspects of pediatrics, and note an inability to recruit such faculty. The federal department of Health and Human Services, Bureau of Maternal and Child Health, has attempted to alleviate this shortage by funding fellowship programs in behavioral-developmental pediatrics. The goal of these programs is to develop future academicians who will then teach behavioral pediatrics to pediatricians in training.

Behavioral pediatrics lacks a clear definition, but is generally concerned with the psychosocial and developmental aspects of child health. It concerns itself not only with the child's disease but the impact of this disease on the child's growth, development, and functioning within the family and society. Traditional medical training continues to emphasize the organic aspects of medicine, with little emphasis on the behavioral-developmental aspects. Yet, because of great strides in medical technology, the field of pediatrics has changed over the last thirty years. No longer do pediatricians spend the majority of their week seeing sore throats and ear infections, measles and mumps. Modern antibiotics and vaccines have greatly reduced the incidence of many once-common illnesses, and parents are no longer content to have simply a healthy child. The majority of parents wish their child to be not only health but be the best child possible in terms of school performance, physical performance, and social performance. As a result, many parents are concerned about their child's inattentiveness, obstinance, impulsiveness, or other unacceptable behavior. They are also far more likely to consult their physician regarding such behaviors than they were in years past. Yet these behaviors are not commonly discussed in pediatric training, leaving many pediatricians poorly prepared to answer such questions from parents. As a result, the physician has had to rely on consultation to psychologists, child psychiatrists, and other ancillary personnel to help manage these problems. With the continuing increase in the number of pediatricians and decrease in the number of children, it becomes clear that expertise in behavioral issues will become important not only to meet the new demands of the consumer but for economic reasons as well. The physician who is able to manage such problems will be able to attract more patients who are interested in having such problems handled.

As the first step in instituting a fellowship program to train behavioral pediatricians for academic positions, the Department of Pediatrics at The Ohio State University developed a formal core curriculum in behavioral pediatrics. The purpose for such a curriculum was to help define the field of behavioral pediatrics as well as to lend structure to training at a postgraduate level in this area. The content of this curriculum was determined through a survey of existing programs in the field, input from state developmental disabilities councils and patient advocacy organizations, and the guidance of an interdisciplinary faculty competent in dealing with pediatric behavioral problems. This interdisciplinary faculty consisted of two pediatricians, a psychologist, special educator, social worker, speech pathologist, audiologist, and nutritionist. As a group, they had extensive experience in dealing with children's behavioral, emotional, developmental, and learning problems. Each member was able to bring to the project a different viewpoint of common behavioral developmental problems affecting children. This resulted in a core curriculum that addresses 66 specific subtopics in 9 broad categories.

Educational goals and objectives were developed for each subtopic along with appropriate readings, tutorials, and clinical experiences. Responsibility for the development of goals and objectives on each topic was apportioned according to each faculty member's interest and expertise. Thus, sections regarding school and learning problems were addressed by a special educator; problems on family dynamics, interviewing, and counseling were addressed by a social worker, etc. Each section was then reviewed by an educator with special expertise in the area of curriculum design. This person examined each section for content, clarity of goals and objectives, and delineation of learning experiences. Each section was then reviewed by a physician for depth and scope of content as well as applicability to the practice of pediatrics. In this way, overly specialized aspects in each area were eliminated and practical knowledge and skills that could be utilized by a pediatrician were emphasized.

In addition to content areas for teaching behavioral pediatrics, there were sections addressing the development of teaching and research skills. These sections were formulated by an educator and a research statistician, respectively. These areas were included for the purpose of training academicians, since teaching and research skills are vital to academic success. The resulting curriculum has been used as the foundation for the fellowship program in behavioral-departmental pediatrics based at Columbus Children's Hospital and The Ohio State University.

After development of the curriculum, internal review among the interdisciplinary faculty, and external review from respected behavioral pediatricians, the curriculum was implemented. Implementation utilized the same interdisciplinary faculty that developed the curriculum, with these faculty members teaching and precepting in those clinical areas in which they have greatest expertise. The Behavior Problems Clinic at Columbus Children's Hospital is staffed by a pediatrician, a psychologist, and a social worker. This team initially performs evaluations on children with behavior problems while the trainee observes. After the initial orientation period, the trainee carries out the interview under the observation of the pediatrician, psychologist, social worker, or some combination thereof. These preceptors then critique the trainee's evaluation technique and provide tutorials or additional readings to reduce deficits in the trainee's skills or knowledge. The trainee's clinical skills and knowledge are continuously evaluated in this fashion. A similar pattern of teaching occurs in other clinics utilizing interdisciplinary teams such as the Learning Disorders Clinic, the Adolescent Health Clinic, and the Comprehensive Evaluation Team at the Nisonger Center.

Use of an interdisciplinary core faculty for the development of a pediatric curriculum departs from the traditional apprenticeship model of medical teaching. First, physicians are generally taught by physicians. The use of other disciplines to develop a content as well as teach the subject matter provides a new perspective on the practice of pediatrics. Instead of having a single pediatrician's knowledge of learning disabilities, for example, the curriculum starts with a special educator's broader knowledge in this area and is then focused to those areas in which a pediatrician can become involved. This provides greater depth and understanding of the problems in that area, and enhances the trainee's learning experience. The same is true for other areas such as interviewing and counseling (prepared by a social worker), the role of nutrition (prepared by a nutritionist), etc. Secondly, structured curricula in medicine have primarily been utilized at the preclinical level. The preclinical or basic science portion of medical school is fairly structured and systematic in the great majority of medical schools. However, clinical training in the various specialties is still an apprenticeship model with students following those patients who are available in addition to general readings in the area. This curriculum is more focused in its specific readings and learning experiences, and benefits from the increased time available for a physician at a fellowship level to spend in learning rather than in providing patient care. The behavioral pediatrician in training benefits from this structure as well as the one-on-one teaching made available by each core faculty member.

COMMUNITY HOSPITAL STAFF AND UNIVERSITY FACULTY DEVELOPMENT OF AN INTERDISCIPLINARY EDUCATION EXPERIENCE FOR STUDENTS IN GERONTOLOGY/GERIATRICS

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Introduction

As an emerging field of health care, gerontology/geriatric medicine brings with it a need for education to develop qualified physicians, nurses, and other health care workers. This education imperative includes several factors: the specific needs of the older population; the rapid growth of this population; and the increasing accountability that this population places upon the health care system as they demand more attention to their individual rights.

Gerontology/geriatric medicine also brings with it a need for the interdisciplinary delivery of health care services as the elderly individual has a more complex interrelationship between the social, economic, psychological, and physical factors. This interdisciplinary focus requires collaboration of services directed toward optimal case management of the elderly client. This collaborative service requirement may be facilitated by an interdisciplinary education model.

In the Mahoning Valley, efforts have been undertaken to assure that the care for the older population grows with this specialty and that the interdisciplinary educational programs reflect this. The basic foundation for the interdisciplinary educational programs was grounded with the Interdisciplinary Geriatric Curriculum (IGC) project. This one-year educational development program, jointly undertaken by the Northeastern Ohio Universities College of Medicine (NEOUCOM), St. Elizabeth Hospital Medical Center (SEHMC), and Youngstown State University (YSU), was funded in part from a grant received by NEOUCOM and the Mahoning-Shenango Area Health Education Network (MSAHEN) from the Department of Health and Human Services. The project proposed to develop an interdisciplinary model of geriatric education to be implemented in the curriculum for medical, nursing, and nutrition students. In the development of the education plan, the IGC staff concerned itself with three main areas: the core content of each discipline's gerontology/geriatrics curriculum; the facilitation of a cohesive interdisciplinary team; and methods of promoting a positive attitude toward aging.

To provide direction for the project, an Interdisciplinary Faculty Group (IFG) consisting of preceptors, educators, and clinicians from the various institutions involved was established as a management team. The IFG met at least monthly to plan the scope of the pilot project; to monitor the implementation of the pilot project; and to evaluate the impact of the pilot project.

The Planning Phase

The IFG convened in September and began by examining the present format of medicine, nursing, and nutrition curriculum: the didactic materials, the clinical sites, and the number of students involved. Gaps and overlaps in materials were identified. This information was used as the building block for further development of curricular content. The goal was to provide greater student achievement cognitively in the field of gerontology/geriatrics as well as to create more positive attitudes toward aging among the students.

A literature search generated articles on core content for gerontology/geriatrics as well as articles specific to development of curriculum for medicine, nursing, and nutrition. This information was shared with the appropriate faculty members along with recommendations based on the experiences of the Director, Division of Geriatric Medicine, and the Coordinator, Geriatric Services. (The Coordinator is a certified gerontological nurse and a master's candidate in gerontological nursing.)

Also available to the faculty of each discipline were members of the IFG for individual consultation on curriculum; for suggestions of clinical sites; for preparation of bibliographies; and for classroom presentations. One or more of these benefits were utilized by the SEHMC school of nursing, the YSU nursing department, and the YSU nutrition department.

The Implementation Phase

Upon completion of all this groundwork, it was decided that due to varied schedules and limited time, each discipline would maintain their own curriculum on their own time frame. However, all the students would come together as an interdisciplinary group on the Geriatric Assessment Unit (GAU).

The GAU is a 12-bed acute care unit designed for the age-65-and-over individual who has a demonstrated rehabilitation potential. The goal of the unit is to improve the client's condition in order to enable return to the prehospital living environment. Chart and clinical rounds are made daily by the geriatrician, residents, medical students, and nursing. The other disciplines, while not always present on morning rounds, do visit the clients daily and are available for consultation with medicine and nursing daily. Every Friday afternoon, a one-hour interdisciplinary team conference is held with medicine, nursing, nutrition, social service, physical therapy, occupational therapy, and speech therapy in attendance. A day room on the GAU is available for congregate meals and for activities such as games, puzzles, and reading.

The medical students continued the four-week elective rotation in geriatric medicine previously established with daily contact on the GAU. The junior-level nursing students from SEHMC school of nursing, sophomore-level nursing students from YSU, and sophomore and senior nutrition students from YSU all rotated through the GAU one week during the course. Nursing students focused on select needs of the elderly population such as social/cultural/environmental assessment and reminiscence/life review during their clinical experience. Some students also focused heavily on communication techniques and others on diversional activities for the acute care client. The nutrition students focused on hospital screening forms, including assessment and diet history, along with listening and problem-solving techniques. In addition to attending daily rounds and weekly conferences on the GAU, the medical students participated in the area day-care centers, nursing home units, and in home visits. During the Friday team conferences, the medicine and nursing students contributed to the discussion based on their work with individual clients.

The Evaluation Phase

Overall, the IGC project was successful. One of the strongest points of this project was the networking that grew among the IFG members along with their willingness to work together; to develop expanded student experiences; to share knowledge; to do research; and to explore future endeavors. Boundary issues were nonexistent as the group worked cohesively and enthusiastically throughout the year. All members of the IFG saw this project as an overall positive experience and want to see the IGC project expanded in the coming year. In addition, the majority of students evaluated the experience as positive.

Some of the problem areas identified included: limited space for gerontology/geriatric material to be included in the respective curricula; the geriatric clinical experience was too brief; and the interaction among the medicine, nursing, and nutrition students was minimal. Each of these areas will be addressed as the IFG reconvenes for the next year.

Universally, schools have difficulty including all the necessary content due to the rapid growth in the health care fields. The IFG recommends the development of an intensive, interdisciplinary gerontology/geriatrics course at YSU that would be available as an elective for all health professions students. This would help provide the content for those individuals interested in gerontology/geriatrics.

The brief interaction with the elderly client can be remedied by integrating increased numbers of clinical experiences with the elderly throughout each respective curriculum. This can include, but not be limited to, the Multipurpose Senior Center, the day care centers, and the nutrition sites.

The minimal amount of interaction among the medicine, nursing, and nutrition students was due in part to schedule conflicts so that the students' time on the unit did not always overlap. Also, some students, particularly nutrition, had conflict with the time of Friday interdisciplinary team conference. As the IFG continues to work together, schedules can be made out to coordinate student experiences to facilitate collaboration. Also, the interdisciplinary team conference has been moved from Friday to Tuesday to allow for more student involvement.

Attitudinal Studies

Methods and Procedure. Not written into the original proposal but incorporated later, the IFG decided to conduct attitudinal studies with the nursing and nutrition students. (The medical students were omitted from the study as there were only two students on rotation during the pilot project.) Instruments used to test the attitudes included the Kilty and Feld Scale of Attitudes Toward Aging (Kilty and Feld, 1976) and the Kogan Scale of Attitudes Toward Old People (Kogan, 1961). The Palmore Questionnaire on Aging was used to identify misconceptions and measure the effect of the course (Palmore, 1977). The sample consisted of 117 students who completed the questionnaires during the first week of the course and again during the last week.

Results. There was logical evidence of redundancy as many of the questionnaire items appeared to measure the same thing. As a result of this pilot project, we plan to reduce the number of items in the Kilty/Feld and Kogan instruments by almost half and increase the number of demographic items.

The sample consisted of 117 students, of which 99 were female and 18 were male. The age range was between 19 and 55, with about 55 percent being age 21 and under. Approximately 78 percent of the sample indicated they were single; 12 percent indicated they were married; 2 percent indicated they were widowed; and approximately 8 percent indicated they were divorced. Approximately 60 percent (70/117) indicated their grandparents were living, and about 63 percent indicated they had prior experience working with elderly patients.

One of the evidences for construct validity of the Kogan scale has been that, in general, increasing age has been associated with higher scores on the Kogan. This validity characteristic of the Kogan was observed in our sample of relatively young participants, where the median age of 21 was used as the cut-off. Sixty-five students comprised the younger group (21 years and under) and 52 students comprised the older group (over 21 to 55). The older group of this sample showed a significantly higher Kogan score than the younger group ($t = 2.45$, $p = .01$).

These data were also cross-tabulated by responses to a question on the demographic data sheet, which asked students whether they had any prior experience working with or treating the elderly. Students who had prior experience with the elderly showed higher Kogan scores, although the difference was not statistically significant. However, students with prior experience with the elderly had significantly higher attitudes scores on the two subscales of the Kilty Attitude Toward Older People and Attitude Toward the Elderly Worker.

About 60 percent of the sample indicated their grandparents were living. The data showed that the group with grandparents living had higher scores on two subscales of the Kilty when compared with the group with grandparents not living.

Summary

In summary, although some problem areas were identified in the IGC project as mentioned earlier, the IFG was encouraged by the cohesiveness of the group, the work accomplished thus far after one year, the positive aspects of the evaluations, and the future prospects of the group. With the suggestions of both faculty and students, the IFG believes that, given adequate resources and time, the IGC project can be upgraded to include the recommendations cited previously. Each IFG member holds a commitment to improving the gerontological education for the future health care professional.

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A SERVICE/LEARNING MODEL FOR INTERDISCIPLINARY TEAMWORK IN HEALTH AND AGING: SOME IMPLICATIONS FOR THEORY AND PRACTICE

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Introduction

A recognition of the multiple, chronic health problems of the elderly has recently rekindled interest in gerontological education circles in how best to train interdisciplinary service teams to meet the multifaceted needs of this rapidly growing population group. Studies have highlighted the critical importance of teamwork skills for health care professionals who will work with the elderly in the United States (Kane, Solomon, Beck, Keeler, and Kane, 1981; National Institute on Aging, 1984) and, more generally, for the provision of community health care around the world (World Health Organization, 1978).

Gerontological and geriatric educators eager to join the ranks of this growing movement, however, might be chastened by even a cursory reading of some of the traditional objections voiced to interdisciplinary teamwork (Rae-Grant and Marcuse, 1968), as well as the more recent Foundations for Gerontological Education study (Johnson et al., 1980) which failed to give unequivocal support to the notion of interdisciplinary training for entry-level health professionals. Indeed, there exists considerable confusion over even the definition and meaning of health care teams, much of which occurs along disciplinary boundaries (Temkin-Greener, 1983). Added to this must be a recognition of the not inconsiderable barriers and resistance to the development of interdisciplinary educational and training programs which should elicit more than passing interest from faculty members struggling to design such programs at their own institutions (Brill, 1976; Ducanis and Golin, 1979; Ehrlich, 1981; Harris, 1978; Kindig, 1975; Mailick and Jordon, 1977; Mazur, Beeston, and Yerxa, 1979). Indeed, there is much truth in the metaphor that those exploring the development of new models of interdisciplinary teamwork training have become academic argonauts, plying largely uncharted waters and navigating the treacherous shoals between the Scylla of departmental defensiveness and the Charybdis of disciplinary dilution. By this we mean on the one hand the problems encountered in over-identification with one particular discipline's approach (to the exclusion of recognizing the importance of others), and on the other the temptation to reduce all team activities to the "lowest common denominator" of common sense, which cannot make use of the powerful insights afforded by the different disciplines which constitute the team.

It is clear that the problems associated with interdisciplinary team training in gerontological education are intrinsic to the nature of programs that cut across disciplinary boundaries and, ultimately, reach to the depths of what we understand in the academic world to be the nature of knowledge and how it is to be understood and mastered. Some recognition of these underlying, theoretical issues must be coupled with the more pragmatic concerns attached to the curricular and resource questions that inevitably arise in any academic venture. Many reports on the development of interdisciplinary training models tend to emphasize the latter to the exclusion of the former.

Thus, the purpose of this paper is twofold: first, it will explore three central theoretical and practical issues at the core of interdisciplinary teamwork training, namely (a) the epistemology of interdisciplinary inquiry, (b) curricular concerns, and (c) administrative and academic resources. Second, it will report of the results of a project at the University of Rhode Island to establish interdisciplinary student teams from the disciplines of medicine, nursing, counseling, pharmacy, nutrition, dental hygiene, and gerontology. These teams were formed to deliver health information and promotion workshops to the elderly at various community sites, including senior centers, adult day care centers, and senior housing projects. This service thrust creates the educational environment critical for the learning of team-building strategies and skills by the student participants. The fusion of these two elements is the essence of the "service/learning model." These two objectives will be inter-related in a summary section with a view toward reviewing the lessons to be learned from the development of such a model.

Theoretical and Practical Issues

Interdisciplinary teams: What's in a name? At the outset, it is important to note that conceptual problems with teams in health care emerge even at the level of choosing terms to describe them, with no established, standard nomenclature. This is at least partially due to the fact that no adequate theoretical framework for thinking about health care teams has been formulated; and as Temkin-Greener (1983) has noted, there is not even agreement on what constitutes a "team." The terms "team," "multidisciplinary team," and "interdisciplinary team" are sometimes used interchangeably and almost always differently by different persons and disciplines. This is important, because how we define different types of teams has crucial implications for how we approach the design of team-building experiences and curricula.

As Petrie (1976) has suggested, multidisciplinary teams may be thought of as requiring everyone to do his or her own thing with little or no awareness of other disciplines' work. These parallel efforts may be molded at the end of the process, however, by a project manager or team leader. Interdisciplinary teams, on the other hand, require integration or even modification of the efforts of the contributing disciplines. The team process demands that the participants take into account the contributions of other team members in making their own. As contrasted with the multidisciplinary model of parallel efforts, this approach suggests intersecting lines of communication and collaboration. One definition of interdisciplinary team that has been proposed (Luszki, 1958; cited in Given and Simmons, 1977, p. 16) captures all of these elements: an interdisciplinary team is a "group of persons who are trained in the use of different tools and concepts, among whom there is an organized division of labor around a common problem with each member using his own tools, with continuous intercommunication and reexamination of postulates in terms of the limitations provided by the work of the other members and often with group responsibility for the final product."

The epistemology of interdisciplinary inquiry. While there have been a number of trends that have supported the development of team approaches to the delivery of health-related services--including professional specialization, an expanding scope for the concept of "health," and manpower considerations (Nagi, 1975)--there is nevertheless a substantial number of potential barriers to the formation of interdisciplinary teams, including educational preparation, role ambiguity and incongruent expectations, authority, power, status, autonomy, and the personal characteristics of team members (Given and Simmons, 1977). Each academic discipline functions as a distinct "culture," with established structural and normative principles guiding thought and behavior. Techniques have been established for the "socialization" of initiates to these professions through various kinds of mechanisms, such as professional role models provided by instructors and by external role cues, such as uniforms.

These factors are closely related to what Sussman (1966) proposes as one of the core characteristics of a profession: its service orientation. By this is implied not only altruistic motivation, but also an accepted definition of the need for the service and the recognition of prestige, power, and status for its providers. Much of the literature on interdisciplinary team dynamics focuses on the potential barriers to team functioning that are rooted in these role-related elements. A second factor, and one that has more profound implications for how we go about designing team-building experiences within the academic setting, is that becoming a professional entails the acquisition of a theoretical body of knowledge and, more importantly, a unique way of thinking about the very nature of knowledge and how it is to be discovered and understood. The development of this unique approach to knowledge is part of the natural history of the development of the profession itself (Ducanis and Golin, 1979).

These differential disciplinary approaches to knowledge and how it is generated may lead to what Pearson (1983) terms "disciplinary turbulence" at the professional level where that knowledge is utilized: "Each science is advancing at a rate totally dependent on the theoretical and technical advances in its own and allied fields. Thus, the vectors of this expansion of knowledge are proceeding not only in different directions but at different rates for each field, creating turbulence and stress at the professional interface" (p. 392). One expression of this turbulence is the confusion created by the use of jargon by team members from varying disciplines, which threatens to turn the edifice of the interdisciplinary team into a Tower of Babel. Eliminating or at least reducing the use of technical terms becomes one of the tasks of the team in its process of developing effective lines of communication among its members.

This attention to the different patterns of language and the key terms used by different professions is one technique to master what Petrie (1976) calls the "cognitive map" of a discipline. This encompasses the entire "paradigmatic and conceptual apparatus" used by a discipline and includes basic concepts, modes of inquiry, problem definitions, observational categories, representational techniques, standards of proof, types of explanation, and general ideals of what constitutes a discipline. If members of an interdisciplinary team do not possess at least a basic understanding of each other's cognitive maps, then it is likely that misunderstandings will result. The comments or suggestions from one team member will be processed and understood in terms of the others' respective cognitive maps. Thus, it is possible for team members from different disciplines to look at the same thing and not see the same thing. To achieve a basic level of understanding to support this communication, Petrie (1976) suggests the use of metaphor; that is, the development of verbal or visual analogies to assist in learning the observational categories of different disciplines.

Following Potter (1969), we can suggest that one's approach to knowledge and its use and understanding is also contingent upon one's values, loyalties, and certain assumptions about human nature and behavior. Each profession embodies unique elements that shape the thoughts and actions of its practitioners, factors which are assimilated during the course of professional training and acculturation. These attitudinal and value-laden components are frequently seen as posing barriers to effective interdisciplinary team communication if they are not addressed and managed (Bassoff, 1976; Mailick and Jordon, 1977; Pearson, 1983). It is interesting to note, however, that the literature on interdisciplinary team training is strangely silent on how such values clarification and attitudinal explication are to be achieved; it is simply assumed to occur during the process of "becoming a team" as members get to know each other and become familiar with each profession's unique approach to the team's objective. This is in marked contrast with the relatively well-developed material on role articulation, ambiguity, and conflict (Given and Simmons, 1977; Lister, 1982; McKenna, 1981; Nagi, 1975).

Discussion of cognitive and value-related elements raises some important issues for the development of interdisciplinary team-building curricula and experiences, particularly if such programs are offered during the early years of training when the student's professional identity and cognitive mindset are still being shaped. The issue of the timing of the interdisciplinary experience, usually couched in terms of pre-professional versus continuing educational programs, will be discussed in more detail later. However, research on student intellectual and ethical development during the college years raises some important questions about how interdisciplinary training should be conceived and structured. Perry's (1970) framework for understanding how students progress through their understanding of the meaning of knowledge and how it can be learned has profound implications for how we view the purpose and structure of interdisciplinary learning. As students advance through the belief that knowledge is simply the accumulation of facts, to a recognition of--and tolerance of--ambiguity, and finally to a commitment to a particular school of thought or a system of values, they possess differing skills and abilities to benefit from an educational challenge that exposes them to other ways of thinking and knowing. Similarly, the work of Kolb (1981) on learning styles and disciplinary differences and that of Witkin (1976) on cognitive styles and students' academic choices and vocational preferences suggests that students are attracted to those disciplines and careers that are consistent with their own ways of understanding and using knowledge. Thus, while students may be further socialized into professional roles and identities, as well as the cognitive maps, of their respective disciplines, it is unlikely that they possessed particular ways of thinking and relating to the world that predisposed them to choosing those areas of inquiry in the first place.

All of this suggests that the designers of interdisciplinary training programs must be more attuned to the individual cognitive styles of their student participants than the literature describing programs developed to achieve effectively functioning teams would presume. While some commentators have suggested the importance of a human developmental perspective on team formation by drawing on the work of Erikson (Ducanis and Golin, 1979) and others have proposed stages for the transformation of team "members" into team "players" (Clark, Spence, and Sheehan,1986), it is apparent that we now need to look more carefully at the interaction between the process of team development and the intellectual and moral development of its individual participants.

Some concrete curricular concerns. Related to these more theoretical issues of cognitive development within the emerging professional identities of the individual team members are some practical problems about when the interdisciplinary team-building experience should be introduced. Concerns here center on the importance of timing: students must have sufficiently developed identities to be able to participate on the team as specific professionals—including the necessary knowledge base which this requires--yet not be so bound up with their respective identifications that they are inflexible in their roles and closed to open communication and cooperation (Harris, 1978). Team-building exposure early in professional training may be particularly important, because this is the time when the strengths and rewards of teamwork can be communicated through the professional identities and practice norms that are being established. This point has been emphasized over the years by a number of authors (Bufford and Kindig, 1974; Hudson and Giacalone, 1975; Lewis and Resnick, 1966; Nagi, 1975; Nichols, 1981; Yeo, 1982) who, while recognizing some of the potential pitfalls of early exposure to interprofessional experiences, have nevertheless stressed its importance in the training of future health care professionals.

Recognition of the importance of at least the principle of early exposure does not eliminate the practical problems encountered in determining the optimal time within individual student curricula for introducing the key elements of team functioning. Suggesting content areas for this task, Ducanis and Golin (1979) have outlined the three elements of interdisciplinary team education at the preprofessional level: (a) cognitive information, including organizational theory, small group dynamics, and the sociology of the professions; (b) affective and experiential learning, including knowledge of how a team operates, how roles are established, and how leadership emerges; and (c) clinical training, in which the student masters clinical skills individually and in relation to other professionals. As Pearson (1983) points out, students from different disciplines proceed through the development of mastery of these three domains at different rates within their individual curricula, so that it becomes difficult to coordinate the timing of the exposure to a team experience when so many factors have to be balanced. This creates practical, logistical problems when the conflicting teaching schedules and the timing of various types of learning experiences within different professional programs all have to be taken into consideration. The "proper mix" of students from appropriate disciplines and training levels can sometimes be a problem (Kindig, 1975; Nichols, 1981) due to difficulties encountered in recruiting students for whom the interdisciplinary team course may be an elective or offered during a period in their training that may make attendance at such a course problematic. This seems especially true of medicine (Harris, 1978; Mazur, Beeston, and Yerxa, 1979; Yeo, 1982).

These problems, which we have grouped together somewhat loosely under the broad heading of "curricular concerns," are not insurmountable, although their solution may be dependent upon the kind and level of support which the interdisciplinary team experience is able to elicit from the site in which it is being developed. Within the educational setting, this is related to the provision of administrative and academic resources.

Administrative and academic resources. Like any other organization developing and marketing a "product," the university is in the business of designing and selling educational experiences, certifying that its graduates have achieved some minimal level of competency in understanding and using information and skills. Particularly during periods of economic retrenchment and fiscal austerity, the level of resources available for developing new programs or courses may be limited. When competing demands are made for programmatic support on a constant or even shrinking "pot" of resources, support for developing or sustaining the new "product line" of interdisciplinary team experiences may be shaky. This is particularly so when such a program may be in competition with long-standing departmental or disciplinary-related priorities.

One key resource of particular significance to the development of team-building courses is the creation and nurturance of a faculty team, whose presence and modeling of the roles and behaviors necessary for effective team functioning can be a key educational component of the students' learning experience (Bassoff, 1976; Kindig, 1975). Importantly, one cannot assume that the modeling of such interprofessional team behavior will simply spring forth, fully formed, from faculty who themselves have been trained, acculturated, and rewarded for the rigors of their disciplinary contributions over the years. Rather, faculty themselves may have to receive training in the very behaviors and skills which the students will be expected to master, a practice recommended by a number of authors (Brill,1976; Harris, 1978; Kappelman, Bartnick, Cahn, and Rapoport, 1981; Mazur, Beeston, and Yerxa, 1979). Indeed, such faculty—once "born again" into the advantages and rewards of team functioning—may serve as missionaries to other faculty members who have not yet "heard the interdisciplinary word" of cooperation and flexibility across disciplinary boundaries. They may encourage other faculty to explore unfamiliar territory; to substitute or add new content to existing courses; and, if necessary, to design and develop new ones (Nichols, 1981) or change existing curricula (Spitzer, 1975).

Simply winning over the cooperation and support of faculty may not be enough to assure the success of an interdisciplinary training venture. As Ducanis and Golin (1979) point out, even faculty members committed to team education have obligations and responsibilities to their own professional programs or schools (Harris, 1978; Peterson, 1975). The result may be that the realities of their position and finite individual time and energy may place limits on what can be done. This brings us to the central issue of the importance of administrative support and academic recognition for faculty involved in team-building experiences. University administrators at all levels (but especially deans and department chairs) must understand and support the goals and operation of an interdisciplinary education program if it is to succeed (Mazur, Beeston, and Yerxa, 1979). This includes the recognition of the contributions of individual faculty members in developing, refining, and institutionalizing such programs. This can be a problem within the university setting, in which departments are set up along narrow disciplinary lines that reward faculty contributions to one's own "group" but which chastise forays into areas that are considered alien and uncharted.

Moreover, adventurous faculty may be reined in by the perception that those attracted by the allure of the unknown will become labeled as incompetents who could not succeed at their own discipline and so had to turn to the "mushy thinking" of undisciplined work. Such an outcome is unfortunate, because it is just those attributes--flexibility, the tolerance of different perspectives, the willingness to experience new modes of interaction, the acceptance of change in authority and status, and even the desire for challenge--which make faculty members particularly appropriate for participating in interdisciplinary educational experiences. All of this should not lead one into viewing the development of team-building courses as the academic equivalent of "Indiana Jones and the Temple of Doom," but it is apparent that without adequate supply lines and recognition for their daring deeds, our intrepid interdisciplinary adventurers will be less likely to risk their reputations on interprofessional ventures.

A Service/Learning Approach to Interdisciplinary Education

It is clear from even a cursory survey of the literature on interdisciplinary team training that a variety of contexts and models for such training exists. Many of these, however, have been developed in the clinical service mode based in an institutional setting. For this reason, the design of an educational model, emphasizing health promotion and the empowerment of the individual client, is an important contribution to the effort of developing a wider range of models with applicability to a variety of settings in which gerontological health is important.

The model under consideration here entailed the development of health education and promotion workshops offered to elderly clients at various community-based sites in Rhode Island by interdisciplinary teams of health science students, including the disciplines of medicine, nursing, counseling, pharmacy, nutrition, dental hygiene, and gerontology. Based on a model developed earlier for an institutionalized population (Clark, 1984), the current project was targeted on participants at senior centers, adult day care centers, and elderly housing projects. A grant from a community foundation provided support for the initial two years of program development and service delivery, while the basic structure and curriculum of the students' educational experience were determined and implemented as a regular interdepartmental course at the University of Rhode Island, coordinated by the Program in Gerontology. The program is now supported by a direct, line-item provision in the state budget.

Project mission. It is essential for the establishment of an interdisciplinary team that there be a central purpose to provide the basis for its existence and toward which its energies are directed. This shared sense of mission establishes the fundamental conditions required for cooperation, collaboration, and interdependent functioning and provides an overarching goal in whose pursuit all participant disciplines are willing to relinquish their respective individual interests. Petrie (1976) terms this "idea dominance"; that is, a "clear and recognizable idea which can serve as a central focus for the work" which is embodied in a concept or model transcending disciplinary boundaries.

For the development and implementation of our service/learning model, this mission was embodied in the idea of client empowerment, the belief that the elderly must be encouraged to take greater responsibility for their own health and to become more well informed consumers of health care services. This is an expression of the growing overall importance of the self-care movement in the United States (Levin, 1981), as well as the recognition of its particular significance for the elderly (Kane & Kane, 1986; Moody, 1985). The positive health effects of enhanced control by the elderly of their lives have been suggested by the research studies of Avorn and Langer (1982), Langer and Rodin (1976), and Rodin and Langer (1977), which demonstrate that greater personal choice and responsibility for the elderly can result in improved health status, greater life expectancy, and overall better quality of life. Berardo (1985) and Ostfeld (1985) suggest that there are many nontechnical, psychosocial interventions that can prolong and enhance the lives of the elderly. coining the term "defensive health behavior," Kane and Kane (1986) have described such strategies as maximizing the benefits and reducing the costs (in terms of morbidity, functioning, well-being, and dollars) incurred by older persons in their interaction with the health care system.

An additional element related to the project theme of empowerment is an emphasis on a functional approach to the health of the elderly (Spence and Brownell, 1984). In contrast to the usual "medical model" with its focus on diagnosis and treatment, concern with function draws attention to larger issues of quality of life and creates a wider "window" for developing interventions that can significantly improve the ability of the elderly to manager their health problems. Such an approach to aging and health challenges the student participants to scrutinize their own disciplines' assumptions about aging and how their professions approach serving an older population. This shared challenge creates a common goal transcending disciplinary boundaries and encouraging new patterns of student thought and behavior.

Program structure and operation. For the health sciences students, the program is offered as a semester-long graduate-level course housed within the College of Human sciences and Services rather than in a particular department. The advantage of this placement is that the experience can be claimed by no individual discipline; rather, it is offered on "neutral" ground within a college which has traditionally supported interdisciplinary fields of study—thereby conferring an element of academic "legitimacy" on the course. Some students from certain curricula, such as pharmacy and nursing, participate in the interdisciplinary experience under the aegis of field-work courses that are required within their own programs of study. Efforts are under way, however, to cross-list the course with individual departments, thereby increasing its visibility and enhancing its "marketability" to attract greater numbers of students. Importantly, the cooperation of faculty members from the participating departments has led to the development of a faculty team, which meets periodically with the students as a group to discuss their experiences and to offer support and encouragement. Faculty also offer individualized consultation with the students from their own disciplines.

The didactic educational experience for the students is structured around a series of weekly seminars supporting the acquisition of knowledge and skills to promote the development of the students' abilities to work as a team and to offer the health promotion workshops in the field. These are led predominantly by members of the faculty team. Topics include: adult education principles, curriculum design, client empowerment, functional assessment, role negotiation, and group development theory and related exercises. Time is allotted each week for student reporting on how the workshops (the field component) are progressing and to permit general discussion of both successes and problems. As the semester progresses, the students learn increasingly to turn to the group itself for support and feedback.

The field learning component of the course is constructed around the delivery of weekly health education and promotion workshops to 10-12 elderly participants at each community site. The students are responsible for the recruitment of participants, an assessment of their needs for health-related information, the selection of appropriate workshop topics, the design of the curricula, and the negotiations required for determining who will actually present which topics. Six to eight individual, hour-long workshops are offered at each site per semester, and topics in the past have included: stress management, drug side effects and interactions, diet and obesity, laxatives and fiber, hypertension, pain management, self-concept and health, and how to use the health care system. Students are challenged to incorporate the principle of client empowerment and a functional approach into each of the topics presented and to meld the expertise from their own individual disciplines in working in interdisciplinary pairs at each workshop session.

Program evaluation. An evaluation of the project's impact on the students required two different, yet complementary, approaches. First, a questionnaire was developed to measure change in the students' gerontological knowledge and their attitudes and their perception of the attitudes of health professionals toward the elderly. This was administered on a pre- and posttest basis each semester. Second, a participant-observational technique was employed to gain a better understanding of the process through which the students progressed from a uni- to a multi- and finally to an interdisciplinary team. This second approach suggests a developmental process through which team "members" are transformed into team "players."

Questionnaire results have been reported elsewhere in more detail (Clark, Spence, and Sheehan, 1986), but a summary indicates that student attitudes toward the elderly improved as a result of participating in this experience. This was measured both by scores on the Palmore (1977) "Facts on Aging Quiz" and by a grouping of 21 semantic differential questions, consisting of paired positive to negative descriptors eliciting student attitudinal opinions of the elderly. After completing the experience, the students considered older persons to be more active and more socially desirable. Students were also asked to give their impression of the attitudes of various health professional disciplines toward elderly patients. Initial findings indicate that all changes were toward a more positive perception, and there likewise was a shift in interest toward specializing in working with older adults.

Of more interest to those concerned with team development and dynamics are the implications of our observations on how students progress from being simply team "members" to becoming real team "players." Here, we suggest that the development of students mirrors the evolution of the concept of the team itself through increasing levels of cooperation and collaboration. In the educational setting, it is important for faculty to become aware of these successive stages when designing experiences whose purpose is to foster the development of truly interdisciplinary teams. Briefly, these stages are: (a) Uni-disciplinary functioning, in which student loyalties are directed toward their own disciplines and programs, which provide them with a source of identity and security. Little significance is attached to relationships with other disciplines; (b) Multi-disciplinary functioning, in which there is tentative exploration of potential relationships cross disciplinary boundaries and the emergence of greater allegiance to the group. Still, team members function independently of one another, in much the same way as children engage in parallel play; (c) Interdisciplinary functioning occurs when clear loyalties to the group are noted. Most importantly, collaborative and cooperative decision making occurs, in which the contributions of different disciplines are taken into account by individuals in modifying their own perceptions of situations encountered by the team and in arriving at solutions to perceived problems.

In spite of the appearance of a clear developmental sequence, it is important to note that this process is not unidirectional and linear, but it may involve considerable "ebbing and flowing" with significant variation among the team participants with respect to the rate and ease with which they progress through the process. The passing from one stage to another entails the successful negotiation of a transitional phase or bridge to the next level of functioning, periods which are often riddled with conflict. A focus on the team's mission can be critical at such times to provide the momentum necessary to carry the group forward. Conflict, however, should not be avoided; rather, it must be channeled in such a way that attention is focused on its causes to resolve problems and to move the group toward its ultimate goal of cooperative and collaborative functioning.

Conclusion

The metaphor used earlier to describe the development and implementation of interdisciplinary team training and education programs as a voyage beset with adventure and perils is a fitting one. Just as student participation in a team-building course is an experience in process learning, so too is its design and operation an exercise for the faculty in sustained patience and attention to both academic and administrative issues. The process of doing so creates the structure within which the program can grow and flourish, provided that certain considerations receive attention. This is especially the case with service/learning models.

At the heart of the service/learning model is the concept of exchange. The students, for example, trade their services--in our case a health education instructional activity--for the opportunity to learn more about older persons and how health care teams work. In addition, an exchange occurs between the university and the agencies which serve as project sites. They provide a place and an audience, while the academic center contributes trained and knowledgeable students with appropriate supervision. Just as the faculty at the university constitute a team overseeing the development of the student team, so do the designated agency staff members become a team in their own right and are included in the program activities and may even attend or present at some of the classes.

The essence of this model is the exchange of resources through the creation of a network. The establishment of such linkages between the university and the community is an example of a "mutual resource exchange network," a concept first developed by Sarason, Carroll, Maton, Cohen, and Lorentz (1977) and later applied specifically to the aging network by Judge, Nichols, and Calkins (1982). In such a network, member parties--whether institutions or individuals--match needs and resources through a barter system. Particularly within a land-grant university with a strong tradition of public service commitment, such a model can provide an appropriate vehicle for the development of an interdisciplinary training experience. When service is recognized by the university as a legitimate form of academic activity, its coupling with educational and even research-related goals can be a powerful combination providing for the recognition of the importance of the activity and its support by university officials. While town-gown tensions between service providers and the university may exist, with suspicion of "ivory tower" academics shared widely by practitioners "in the service trenches," nevertheless the receipt of a valuable service with the appropriate academic supervision can go a long way toward placating agency heads who are pleased to offer expanded services at no extra cost and who may find personal and agency recognition in being affiliated with an academic center.

Cognitive barriers following disciplinary borders may be more difficult to overcome, with continued internecine warfare waged along departmental picket lines. These problems are likely to remain as long as the university is structured along the traditional lines representing different approaches to knowledge and learning. However, the development of a strong service mission for the formation of an interdisciplinary team can overcome some of these problems, particularly if the program can be offered a "home" on neutral academic ground. Issues of recognition and reward for faculty members retain, however, particularly when service activities may be considered at the bottom of the academic totem pole. Vocal support from the upper levels of the administration, coupled with the concrete provision of resources, can resolve much of the difficulty.

As the search for new models for interdisciplinary team training continues, particularly in settings other than the direct clinical service mode, it is apparent that a service/learning model offers potentials and potentialities. With some individual tailoring to specific contexts, and careful attention to the theoretical and applied problems that plague any type of interdisciplinary effort, its success can be assured. Adventurous faculty members embarking on the development of such programs may, however, find it necessary to lash themselves to the mast of interdisciplinary commitment to avoid being lured by the Siren songs of departmental identification and the blandishments of uni-disciplinary success within the turbulent seas of academe.

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INTRODUCTION

EVALUATION OF INTERPROFESSIONAL EDUCATIONAL EXPERIENCES

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This session entitled "Evaluation of Interprofessional Educational Experiences" focuses on cross-course comparisons and research on attitude change as the result of interprofessional education.

Dr. Lipetz, using a metaanalysis model, showed that all interprofessional courses taught were evaluated favorably by students. Students who took these courses also developed a positive attitude about other health disciplines. Dr. Casto et al, whose research and data collection reflect a continued commitment to research and evaluation, also showed that students are positively influenced as the result of interprofessional courses. According to Dr. Casto, students who select these courses value interprofessional collaboration begin to establish positive attitudes about interprofessional teaming and the contributions that each profession makes to the care and treatment of clients.

As the results of these two studies indicate, it is clear that interprofessional education is an important force in the training of practicing professionals. Furthermore, by sensitizing a larger student population from such disciplines as law, medicine, nursing, allied health, education, social work, and theology to interdisciplinary education, a more ideal model of collaboration will be created and fostered.

A META-ANALYSIS OF INTERPROFESSIONAL EDUCATION AT THE UNIVERSITY OF ILLINOIS AT CHICAGO

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Introduction

The University of Illinois at Chicago has been actively encouraging interprofessional education for students in the health professions since 1983. Twelve experimental courses have been offered between 1984 and 1986. This paper presents a meta-evaluation of student and faculty evaluations of those courses.

As a result of intense student interest in the area of health care teams, the University of Illinois at Chicago (UIC) in 1983 convened a student-faculty committee for the purpose of encouraging interprofessional education on campus. Faculty members are appointed on an annual basis by the deans of all colleges and schools primarily oriented to the health professions, and students in those units are selected in a variety of ways to represent their respective student bodies. The Interprofessional Education Committee has been allocated a small budget for program development on an annual basis since its inception.

In order to encourage the development of experimental inter-professional courses, the committee awards funds based on an internal competitive request for proposals (RFP) that is distributed to all faculty annually. The RFP specifies that proposed courses must involve students and faculty from at least two colleges with departments oriented to the health professions, be oriented to clinical or field experiences or have clinical relevance, and fit in the curricula of the involved programs. Proposed experiences must carry academic credit. Involved colleges must agree to match in some way funds awarded by the committee, typically through released faculty time, space, secretarial services, or supplies. All offerings must be evaluated in some way, and colleges must agree to continue offering successful courses on their own resources. In three years, eleven courses have been offered involving 175 students, 50 faculty, and virtually all relevant academic and support units. Eight of the eleven have been or will be repeated. The three that were not repeated were evaluated favorably, but involved faculty were unable to continue. The committee awarded from $2,000 to $8,000 to each course as requested in the proposals. A brief description of each appears in Appendix A.

The University of Illinois at Chicago's approach to inter-professional education is different from that of other campuses. It is a grass-roots approach that challenges faculty to both cooperate with and compete with their colleagues to create new educational experiences for students. There has been no attempt to mandate a central core of courses, as at the University of Nevada-Reno, or to locate courses primarily in one college, as at the University of Kentucky or at Lehman College. There has also been no attempt to do outreach into community professional organizations or to other local universities as Ohio State has done. It remains to be seen whether the UIC approach will have the success or longevity of these and other more established programs.

Evaluations

Evaluation documents from ten of the eleven courses were reviewed and synthesized for purposes of this analysis. Because each faculty team devised its own evaluation, it was not possible to analyze results according to preordained categories. Rather, similarities and differences emerged from the reports themselves. The following discussion of major problems and successes associated with the experimental educational offerings is based on that analysis. All courses were evaluated quite positively by both faculty and students, an unusual occurrence for elective courses.

Problems

Use of funds. Most of the funds awarded by the committee were used to buy faculty time to teach the course, hire research or teaching assistants, purchase books or audiovisual materials, hire process consultants or speakers, or videotape speakers or team meetings. On several occasions, however, funds were used primarily to hire part-time faculty specifically to teach the new course. In most cases, these faculty designed the involved courses and were well qualified to teach them. The problem created by this situation was the instability of the future of such courses. In order to continue offering successful courses, involved colleges would have to continue to hire part-time faculty in a time of unstable resources or assign the course to full-time faculty who had not been involved in the experimental year. In all cases, intensive discussions were held with faculty to revise budgets so that the involved colleges were at least partially financially responsible for part-time faculty during the experimental year. However, the issue of relying on potentially transient faculty remains.

Faculty teams. The intent of the Request for Proposals is to encourage the development of interprofessional faculty teams who would ultimately serve as role models for students. In several cases, especially courses in geriatrics and in women's health/primary health care, this did occur. In many other cases, however, one faculty member had an area of expertise or an idea for a course and asked colleagues to participate. While these courses did exemplify collaboration, they did not necessarily lead to the ongoing presence or functioning of a faculty team. In some cases, one faculty member attended all class sessions while others attended selected classes or presented one, or a series of classes. True role modeling around teamwork could not occur in these instances, even though students were exposed to multidisciplinary perspectives on a topic.

Release time. Because new courses were funded for the implementation period only, some faculty involved in teaching indicated that preparation prior to the actual teaching of the course was far more time consuming than had been anticipated. Working with an interprofessional team that cuts across a number of colleges requires a different kind of coordination and decision making than does preparation of a routine lecture or discussion course. Faculty members consistently indicated that this additional amount of time was unanticipated, particularly by those without much prior team experience, and that course planning was a bit more difficult. Many were concerned about this increased time expenditure on a long-term basis: continuing to offer each of these courses over time would require additional preparation and teaching time.

Scheduling. The intent of offering interprofessional courses to students in a number of different colleges was to allow each student to get course credit for the interprofessional course in his or her own college. Thus, students could register for the same course under a number of different course listings that would be appropriate to their college requirements. Because of some bureaucratic regulations within the University, it became very difficult to offer the same course under a number of different course listings. This became frustrating for both students and faculty because there was a recognition that the inability to get credit in the college would make the courses less attractive to students. An additional kind of scheduling problem was related to the fact that different colleges are actually on different academic calendars. On campus, the College of Medicine starts approximately two weeks prior to the rest of the units and does not operate on a typical quarter basis. In several instances, particularly in courses with clinical experiences, it was difficult to schedule times when students from different colleges would all be available. Because of these scheduling difficulties particularly in the College of Medicine, most of the medical students who were able to enroll in the various interprofessional courses were students who were following an independent study program rather than the ordinary class curriculum.

Enrollments. Enrollments ranged from five to approximately forty in the various courses. Many of the courses had a limit on the number of students who could enroll. One course, for example, limited enrollment to eight students and another to sixteen. In all instances, enrollments may have been affected by the lateness of course approval by the committee and the resulting inability of new courses to be listed in the normal quarter schedule. All new courses were advertised within the relevant colleges, but it is unclear whether all students who would be potentially interested in the courses even knew about them. An additional interesting note on enrollments, which may potentially be problematic, is that there was a high enrollment by women students, particularly in low-enrollment courses. The number of women generally who were enrolled in all of the courses was very high, but in some cases, all of the students involved were women. Whether or not team courses appeal more to women is a question for further research.

Role Differentiation. In some of the courses, faculty members and students had some difficulty in coming up with role differentiation in areas where there was a normal role overlap or in areas that were new to everyone. For example, one course involved collaboration between the School of Public Health and the Department of Public Health Nursing. Students had some difficulty in determining what was an appropriate role for a public health professional versus an appropriate role for public health nurses. In some of these cases, there may in fact be no role differentiation, but that creates some interesting issues to discuss in the context of a team. In another course that involved community nursing and community medicine, second-year medical students had some difficulty trying to figure out what a proper role was for physicians in the context of the community. While it has been noted in other research that role differentiation over time may become less clear, we have seen very little that addresses difficulties in role differentiation early in the team experience.

Content versus process issues. The evaluations from one particular course indicated that students had learned much more about one another's roles and responsibilities and about team process issues than they had about the content area of the course. It was not unusual for students and evaluators in many of the courses to request more reading or a heavier focus on the topic of course rather than on team issues. Finding an appropriate balance between team process/team development issues and the particular clinical area emerged in several areas. The reverse was not true. None of the evaluations indicated a problem in the course spending too much attention on course content rather than on team process issues, and it is possible that in a couple of the more didactic courses, very little attention was actually paid to team issues. This was certainly not the intent of interprofessional education on campus.

Successes

Team experiences. For most students and most involved faculty, this course represented a first experience with teamwork. For virtually all students, this initial experience was a positive one. One or two students per course indicated some dissatisfaction with the course content, with the concept of teamwork, or with the dynamics in their particular team. However, the evaluations of the courses were overwhelmingly positive, which is relatively unusual for electives and new courses. Student satisfaction with these courses has been a primary motivation in continuing support for new, team-oriented courses.

Student experiences. In several of the courses, students were given pre- and posttest attitude instruments to complete as part of faculty research programs or as part of the evaluation. In all courses in which these instruments were administered, students consistently showed a positive change in attitudes toward other health professionals who were part of the course, and no change in attitudes toward health professionals who had not been part of the course. It is our conclusion that direct involvement with members of other health professions through these kinds of experiences is a positive experience that may have implications for future collaboration.

Role modeling. Evaluations of courses in which there was a pre-existing team or a newly convened team that was actually practicing in a clinical area indicated that students benefited greatly from those role models. Learning by doing in all health professions education is critical, and learning how to be a member of a team was easier when team practice was evident. One of the issues to be addressed as a result of this knowledge is that faculty development around teamwork may be a necessary first step in teaching interprofessional courses. Faculty members who are interested in functioning as team members but who have little or no experience in team care may need to develop team skills prior to involving students.

Use of videotapes. In a number of the courses, committee funds were used to videotape team meetings, simulated case presentations, or guest speakers. While the videotapes of team meetings had immediate usage as team members were able to play back team meetings and critique one another's participation, videotaping speakers or other presentations had an impact on future course offerings. Because committee funds are awarded for only one year, guest speakers cannot be brought in every year for the good of the course. By videotaping guest speakers, students in the future will be able to take advantage of those special presentations.

Process consultants. Several of the courses used committee money to hire on a short-term basis representatives of the campus's counseling service to serve as process consultants during team meetings. Response to the availability of a process consultant was overwhelmingly positive. One course came to the committee during its second offering with a special request for additional committee funds to be able to continue hiring the process consultant. Because of the faculty's perception of the importance of that presence, special funds were allocated for this second year.

Future offerings. It has been the hope of the committee that courses successfully evaluated during the experimental year would be offered on an ongoing basis under the auspices of the involved colleges and schools. In a tight budget year, this may be unrealistic. However, of the twelve courses that have been approved and of the eleven that have been offered at least once, eight have been granted permanent course numbers through the various course approval processes and there are plans to offer all eight a second or third time. While it is unrealistic to believe that all new courses should be repeated every year, faculty interest in turning experimental courses into ongoing courses has been consistent despite pressures from the various colleges to the opposite.

Recommendations

Based on three years' worth of experience and feedback from 175 students and 50 faculty members in virtually all academic units oriented to the health professions, there are some recommendations about future interprofessional courses at the University of Illinois at Chicago:

1. There is a need to devise consistent evaluation mechanisms. Data must be collected from students in interprofessional courses in a consistent way for purposes of research and future program planning. Without these data, it becomes very difficult to make appropriate decisions in any academic atmosphere.

2. Evaluations must address cost issues. It appears that team teaching and interprofessional courses are more expensive than other courses, but this fact has not been documented on our campus. If this is in fact true, yet the courses are seen as worthwhile and appropriate, arguments need to be made to address the issue of whether team teaching and team care are cost effective.

3. There is a need to become proactive in developing topics that may be appropriate for interprofessional courses. Until now, it has been the responsibility of faculty teams to select their own topics. While all of the topics have been of interest to students, relevant, and current, there may be some basic material appropriate for a team approach that has simply not been covered. The committee has considered developing a module on interprofessional education and practice that would be appropriate for use in introductory courses in all of the colleges. There is some interest in having access to such a module.

4. To date, there has been no follow-up research on students who have had a team experience. It is imperative to begin a research program on students in practice to assess the impact of interprofessional education on practice. It may also be desirable to question clinical supervisors of those graduates. This research, coupled with student evaluations, could be very important for future program development.

5. With an increased emphasis on diversity of settings in the health care system, it is imperative to develop additional team experiences in community settings such as clinics, community agencies, or specialized centers. Because the hospital is only one appropriate setting for team care, students ought to be exposed to team care in alternative settings.

Consistent feedback from students and faculty involved in interprofessional courses sponsored by the Interprofessional Education Committee at the University of Illinois at Chicago indicates that this approach on this campus at this time has been most successful. While there are some particular problems related to these courses, we believe that the benefits far outweigh the problems at this time. A review of these course evaluations has forced the committee to reaffirm its commitment both to interprofessional education on campus and to its grass-roots approach to course development with a very realistic view. Permanent funding for the committee's efforts is highly likely at this point and the role of interprofessional education on campus is becoming increasingly ingrained and expected.

APPENDIX A

COURSE DESCRIPTIONS

UNDERSTANDING HEALTH SERVICES UTILIZATION MANAGEMENT

SUMMARY REPORT

This utilization management course was a joint effort of the College of Medicine, Department of Family Practice, and the School of Public Health, Health Resources Management Department, and was offered only during the 1984 summer quarter. Nineteen students enrolled in the course. The major goal of the offering was to introduce an interdisciplinary group of students to utilization review through simulated case studies.

Students indicated that the course structure and presentations were received well. The use of consultants was found to be very beneficial. Students indicated that the major weakness of the course was the absence of more structured readings or a textbook. The course examination indicated that all but two students showed a substantial understanding of the process and problems of utilization review by the end of the course.

NUTRITIONAL ASSESSMENTS FOR NURSING AND NUTRITION AND MEDICAL DIETETIC STUDENTS

SUMMARY REPORT

This course involved the College of Nursing, the Department of Nutrition and Medical Dietetics in the College of Associated Health Professions, and the Counseling Service. It was offered during the 1984 spring quarter only. The major goals of the course were to enhance interprofessional communication and to improve the quality of nutritional assessments of patients.

Nineteen pairs of sophomore nursing and junior medical dietetics students participated in this project. The course was organized to allow members of each student team to individually interview the same simulated client, to jointly view the videotapes of those interviews, to receive evaluation feedback from faculty, to jointly develop comprehensive patient care plan and, to evaluate the experience. All of the student pairs completed the major portions of the experience, but only 28 of the 38 (78%) participated in the final evaluation session.

Student evaluation of the project was quite favorable. More than two-thirds of the students rated learning activities as mostly to extremely effective in meeting stated objectives. Overall, they rated the videotape/feedback session as the most beneficial aspect of the project. All of the students who participated felt it should be continued. Analyis of data collected indicates that, as a result of the project, there were important shifts in students' perceptions of the importance of professionals from the other discipline in patient care.

LATCH - LITERATURE ATTACHED TO THE CHART

SUMMARY REPORT

The Library of the Health Sciences with the Colleges of Associated Health Professions, Medcine, Nursing, and Pharmacy demonstrated the utility of LATCH, Literature Attached To the Chart on the Psychiatry Unit (8 East) of the University of Illinois Hospital during the spring quarter, 1984, and continued through 1985. The service was made available to all faculty, students, and staff involved with patient care, clinical education, and research on the unit. Anyone with questions regarding a patient on 8 East could call the Library and request a LATCH package. For each request, librarians searched the recent interdisciplinary professional literature to find articles relevent to specific patient problems. The requestor was given the option of selecting articles from the computer print-out citations or of asking the librarian to select the articles. Once relevant articles were selected, library staff prepared a package of materials which listed all relevant citations. The LATCH package was delivered to the patient unit where the unit clerk attached it to the patient's chart. Over 100 LATCH requests were made during that time period.

AN INTERPROFESSIONAL TEAM EXPERIENCE IN A RURAL HEALTH CENTER

SUMMARY REPORT

During spring quarter 1984, eight public health nursing students and eight student physicians participated in an interdisciplinary learning experience at the Mt. Morris Community Health Center in Mt. Morris, Illinois. The experience consisted of six seminar sessions co-led by a nurse/physician faculty team and student team home visits to a selected area family.

Each student team made at least two home visits to their selected family and collaboratively wrote a summary of the family's health-specific coping ability. Families who needed and desired further health services, such as health education or referrals, were visited more frequently by the student team.

The value of the experience to the students was expressed in one evaluation: "We both felt the experience was very worthwhile, and we gained a new insight and respect for each other's place in the health care field in providing optimum patient care."

DEVELOPMENT OF AN INTERPROFESSIONAL TEAM EXPERIENCE WORKING WITH COMMUNITY WOMEN ON HEALTH PROBLEMS/ISSUES

SUMMARY REPORT

This course was offered jointly by the College of Nursing and the School of Public Health during the summer quarter of 1984 and has been repeated in 1985 and 1986. The purpose of the course was to provide graduate students from a variety of professions with an educational opportunity to have classroom, seminar, and field experiences related to Women's Health using a primary health care approach as defined by the World Health Organization.

The course was limited to ten students primarily from the School of Public Health and the College of Nursing. Staff from Mujeres Latinas en Accion, a community agency, was also involved in the course.

The field experience for the course provided an opportunity for students to work with the women at Mujeres Latinas en Accion. Students conducted community health needs assessments with a variety of women through the agency. Three health projects were selected by the staff and students during 1984 from the needs assessment and were undertaken during the quarter. One of the criteria for project selection was the enhancement of the staff's ability to provide health services to the community after the course was completed. Staff and students met together to evaluate the process and the results of their work.

INTERDISCIPLINARY GERIATRICS COURSE

SUMMARY REPORT

The Interdisciplinary Experience for Students and Trainees in Team-building and Team-Care in Geriatrics involved the Colleges of Medicine, Nursing, Associated Health Professions, Pharmacy, the Library of the Health Sciences, the Counseling Service and CED. This course first met during 1984 and has been offered in 1985 & 1986. The course goals are: 1) To experience team building and team care; 2) to improve/modify attitudes toward other professionals; and 3) to develop the ability to work together toward a common goal. Course enrollment is limited to eight.

The course format called for two sessions per week. In the first session each week, two students were responsible for presenting and discussing one patient case. Faculty observed the case presentation and resulting student discussion, and faculty and students then discussed both the case and the group process. During the second session each week, students observed the regularly scheduled interdisciplinary faculty conference. Two of the sessions were videotaped and the remainder were audiotaped.

In general, the course goals were attained. The students were extremely positive about the course and made modest positive changes in their views of the effectiveness of health care teams and the contributions of the various disciplines to health care.

MODELS FOR THE FUTURE DELIVERY OF HEALTH CARE

SUMMARY REPORT

This course was a joint effort of the School of Public Health, College of Medicine, the School of Urban Planning and the Department of Management and was first offered during the 1985 summer quarter. Twelve students, half with clinical backgrounds, e.g., dentist, nurses, physicians, and half with non-clinical backgrounds, e.g., management, economics, were enrolled.

The goal of the course was to bring together students to examine from different perspectives the directions health care professions are heading as the end of this century is being approached.

The course was conducted as a graduate seminar. Class projects included a literature review, an examination of a "real world" experience, and an analysis of what they found with conclusions.

Ten student evaluations were received. All of the evaluations were enthusiastic and positive. The course was well accepted by the students and endorsed by the faculty. The course is being repeated in 1986.

AN INTERPROFESSIONAL APPROACH TO NORMAL AGING

SUMMARY REPORT

This basic survey course, combined with experiential learning, explored theories of aging, changes in normal aging and focussed on the well elderly as seen through the interprofesional contributions of faculty representing the College of Associated Health Professions, the College of Nursing, The School of Public Health and the Graduate College The course was first offered during the 1985 summer quarter and will be repeated in 1986.

Four graduate students took this course for credit representing the professions of Nursing, Pharmacy, and Hospital Administraton in Public Health.

The course focused on the well elderly and offered field experiences through observation, discussion and direct contact with the elderly. Didactic classroom work combined lecture and discussion related to normal aging. Panel discussions demonstrated interprofessional contributions and opportunities for research.

Student evaluation of this project was done through an instrument given to students and faculty assessing content value of presentations and perceptions of experiential learning. Students and faculty were unanimous in their recommendations that the course be offered again. The course also provided a role model for faculty to exchange ideas in a collegial atmosphere.

THE ORGANIZATION AND USE OF A TEAM APPROACH TO TEACH HIGH RISK WOMEN ABOUT STRESS AND STRESS MANAGEMENT

SUMMARY REPORT

This project will be offered for the first time in 1986 and will bring together students and faculty in the disciplines of Medicine, Medical Social Work and Medical Sociology from the College of Medicine at Rockford, the School of Social Work in Urbana-Champaign and Northern Illinois University. Students and faculty will work together on the development, implementation and evaluation of a program on stress and stress management for adolescent mothers.

IMAGES OF THE HEALTH PROFESSIONS IN THE MEDIA

SUMMARY REPORT

This didactic course was designed to study the basic perceptions and misconceptions that health professionals often hold about one another and to consider the social dynamics that underlie or perpetuate those images. This course is a joint effort between the Center for Educational Development, the College of Medicine, the College of Nursing and the College of Pharmacy. The course is currently in progress (spring 1986), and forty five students are enrolled.

The course is designed to provide ongoing interprofessional discussions among faculty and students and requires interprofessional cooperation among students on the major course assignment.

A training component for current faculty and a system for training subsequent instructors is built into the course. Although the course format is didactic discussions, in-class exercises and assignments focus on clinical aspects and implications of media images of the health professions.

DYING, DEATH AND GRIEF
THE INTERPROFESSIONAL CARE OF DYING PERSONS AND THEIR FAMILIES

SUMMARY REPORT

This special topic course was a joint effort of the School of Public Health, Community Health Sciences Department, The College of Associated Health Professions, Medical Social Work, and Nutrition and Medical Dietetics Departments, the College of Nursing, the College of Medicine and the College of Pharmacy. The major goal of this course was to prepare health profession students in both the classroom and field setting, to identify and implement basic principals of current interprofessional approaches essential to understanding and facilitating family processes associated with family bereavement and caring for dying persons. Eight students are enrolled in the course.

AN INTERDISCIPLINARY APPROACH TO ETHNIC HEALH

SUMMARY REPORT

This course is a joint effort by the School of Public Health, Community Health Sciences Department and the College of Nursing, Department of Psychiatric Nursing. The course is being planned for summer quarter 1986.

The purpose of this course deals with two main issues:

1. the concern for ethnic health with focus on the health of refugees and recent immigrants into the Chicago area; and
2. the concern with the development and promotion of interprofessional models for dealing with certain aspects of ethnic health

This course will combine information with analytic case-based role-playing and on-site clinical experiences. The course content will emphasize both theory and practice of team-work in health care delivery, as well as the "special" health needs and issues of recent immigrants.

ATTITUDE CHANGES AMONG STUDENTS ENGAGED IN INTERPROFESSIONAL EDUCATION: FURTHER RESULTS AND DISCUSSION

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Introduction

The study of attitude change among students engaged in interprofessional education courses at the Ohio State University has been of interest to faculty. researchers and funding sources for the past five years. While research in attitude change is difficult and imprecise at best, it still remains an important component in measuring the success of efforts to provide opportunities for education in interprofessional collaboration. Attitude changes signal a shift in the student's approach to professional practice and are an important component in the process of professional socialization. Indeed, some researchers have demonstrated that professional identity and accompanying attitudes may be among the most long-lasting effects of professional education (Simpson, 1979; Waugaman, forthcoming, 1987). They point out that pre-service education is the arena in which professionals begin to formulate, refine and adopt the values of their profession and their attitudes about professional practice.

These values and attitudes continue to shape the student' professional practice throughout their career resulting in extended professional commitment and a high degree of self-identification with the profession. Education for the professions and the values and attitudes which it develops has a meaning, therefore, which extends beyond the boundaries of transmitting a specific body of knowledge or a particular group of skills. It has a continuing impact on the practice of the profession and the shape of that practice. Through the attitudes and values that are formed, pre-service education influences the identity and self-understanding of the professional long after its formal conclusion. Therefore, the study of changes in attitudes is important in assessing the long-term effects interprofessional education has on professional practice.

Background Of The Study

This study is based on the same theoretical assumptions with regard to the traits of the learner and the nature of attitude formation and attitude change as the study presented at the Seventh Annual Conference on Interdisciplinary Health Team Care in 1985. In that study we adopted a view of people as "holistic and open" (Casto, et.al., 1986, p. 201). We argued that the person is "selective, organismic and developmental" (White, 1975, p. 19). Pedagogically, this view correlates with the principles of adult learning which Malcolm Knowles presents (Knowles, 1980).

We defined "attitude" in accordance with Irving White: "an attitude is the internalized 'choice' reflecting an individual's predisposition to actively select and organize his experience in relatively continuous and predictable ways. These predispositions are products of biological, personal and cultural forces working toward an identity system capable of determining affirmative behavior" (White, 1975, p. 20). We argued that "this holistic definition of attitude recognizes the individual's capacity to select and organize experience into predictable choices. Attitude change, then represents more than a random or ad hoc response but rather a new point of view in the emergent restructuring of experience. It further represents the individual's capability of growth and change influenced by his or her life context. Attitudes of students in interprofessional education are to be understood in part by their level of personal and professional development." (Casto, et.al., 1986, p. 202.)

In the previous study we also discussed attitude change in the context of group behavior as well as the current status of attitude change research done in relation to interprofessional groups. Very little evidence exists by which to evaluate or verify the current studies. The distinction McCorcle provides between interdisciplinary groups and other kinds of groups proved to be useful in identifying important features of interprofessional groups. First, the interdisciplinary task group is an open rather than a closed system owing its existence to some outside agent who places unpredictable requirements on the group. The group therefore will be expected to engage in various activities to respond to interactions within this larger environment. Second, production schedules and commitments to outside agents emphasize the time boundaries of the group. The behavior of the group will be influenced by an emphasis on task requirements. These two characteristics, openness of group boundaries and the needs of the group to attend to the task requirement, present a dilemma for the interprofessional group (Casto, et.al., 1986, pp. 202-203 and McCorcle, 1982). It is at once encouraged to develop its own life and at the same time adapt its life to the demands of its environment. Throughout this process attitudes are shaped and formed with respect to both professional practice and interprofessional collaboration.

Assumptions Of Interprofessional Education

Interprofessional education at the Ohio State University is founded on a series of considered and refined assumptions which provide both direction and content for the program. While the entire list of assumptions is too extensive to include in this study, it may be helpful to indicate the unifying concepts related to several of the assumptions. Throughout the assumptions there is an emphasis on the human wholeness of both professionals and clients. This emphasis demands that those who provide services avoid fragmentation. Professionals need to be open to the perspectives of others and willing to engage in cooperative efforts. Whether professionals are considering complex client problems or complex concepts and decisions, technological advances in society and the explosion and availability of knowledge require in many instances an interprofessional approach.

Ethical Issues Common To The Helping Professions At The Ohio State University

The interprofessional seminar, "Ethical Issues Common to the Helping Professions," has been offered to students at the Ohio State University for the past thirteen years. The enrollment currently consists of students and practicing professionals from the Ohio State University School of Allied

Medicine, the Colleges of Nursing, Medicine, Law, Education, Social Work and the Columbus Cluster of Theological Schools. Faculty from each academic unit provided lecture and discussion of content and led their respective professional group as well as an interprofessional group of ten to twelve students. Lectures in the course included an introduction to ethical thinking, professional ethics and codes of ethics, and a consideration of the difficult ethical issues involved in privacy and confidentiality, professional accountability (including report of error and malpractice), death and dying, the problems of adolescence, and the allocation of scarce resources. Case studies presented by faculty provided the basis for discussion in both the professional and interprofessional groups. Students completed reading and written assignments. Evaluation of students was based on participation in class and completion of the written requirements.

Method Of The Study

Once again a thirty-seven item paper and pencil questionnaire was use to gather demographic and attitudinal data from the students. Thirty-two semantic differential statements were constructed around five central themes:

1. Attitudes about the value of the seven human service professions represented by seminar participants;
2. Attitudes about the role of conflict in the interprofessional team process;
3. Attitudes about the structuring of interprofessional group organization;
4. Attitudes about the nature and distinctiveness of one's role as an interprofessional team member;
5. Attitudes about one's willingness to participate in the interprofessional group process.

A five-point scale of degree of agreement or disagreement was used. There were also two sentence-stem items designed to elicit information regarding professional and interprofessional goals and three items designed to elicit demographic information.

Seminar participants were asked to complete the questionnaire both at the first and the last meetings of the seminar. The same questionnaire served as the instrument for both pre- and post- assessment. Responses were then computer-analyzed according to professional group, and pre- and post-assessment.

Subjects

Seminar participants included degree students and professional practitioners. Of these participants the study's subjects were those persons who voluntarily completed either/or both the pre- or post-assessment instruments. Subjects were not paired according to group. Of 184 pre- and post- questionnaires distributed to participants, 86 were returned to yield a 46% response rate. Pre-and post-assessment data were handled as aggregate data with no attempt made to match individual responses.

Demographically, subjects identified themselves according to profession, age, and sex:

Professions	Number Enrolled	Pre-Assessment F*	Pre-Assessment %	Post-Assessment F	Post-Assessment %	Aggregate F	Aggregate %
Allied Medicine	10	5	12.5	7	15.2	12	14.0
Education	17	7	17.5	9	19.6	16	18.6
Law	16	4	10.0	5	10.9	9	10.5
Medicine	11	3	7.5	5	10.9	8	9.3
Nursing	8	4	10.0	3	6.5	7	8.1
Social Work	17	11	27.5	11	23.9	22	25.5
Theology	13	6	15.0	6	13.0	12	14.0
Other/Unknown	0	0	0	0	0	0	0
	92	40	100.0	46	100.0	86	100.0

*F (Frequency) denotes the number of subjects who represented each professional group

% (Percent) denotes the comparative proportion of subjects in relation to the subject-sample.

Age	Pre-Assessment F	Pre-Assessment %	Post-Assessment F	Post-Assessment %	Total F	Total %
21 - 25	14	35.0	16	34.8	30	34.9
26 - 30	12	30.0	15	32.6	27	31.4
31 - 35	4	10.0	5	10.9	9	10.4
36 - 40	3	7.5	3	6.6	6	7.0
41 - 45	1	2.5	2	4.4	3	3.5
46 - 50	2	5.0	3	6.5	5	5.8
51 - 55	3	7.5	1	2.2	4	4.6
56 - 60	0	0	0	0	0	0
61 - 65	1	2.5	1	2.2	1	2.3
	40	100.0	46	100.0	86	100.0

Sex	Pre-Assessment F	Pre-Assessment %	Post-Assessment F	Post-Assessment %	Total F	Total %
Male	13	32.5	19	41.3	32	37.2
Female	27	67.5	27	58.7	54	62.8
	40	100.0	46	100.0	86	100.0

The subject sample represented all participating professions, with social work comprising about one-fourth of those participating, Allied Medicine, Education and theology each represented by about one-eighth of the sample, and law, medicine and nursing represented by about one-tenth of the sample. The age of the subject sample was widely distributed about a mean of 31 years with a standard deviation of 9.8 years. In comparison with the class rosters, the sample corresponds with the seminar participants.

Data Analysis of Results

In analyzing subjects' responses, researchers used SPSSx (Statistical Package for the Social Sciences, revised edition) to derive all pertinent descriptive statistics, t-scores, and Pearson Correlations from the 32 semantic differential items in addition to five combination variables. These combination variables resulted from grouping 26 semantic differential items around the five central themes of the study, listed as follows:

1. VALU identified attitudes about the value of including representatives from each of seven professions as members of an interprofessional team.
2. CONF identified attitudes about the role of conflict in interprofessional team process.
3. EQAL identified attitudes about the egalitarian vs. hierarchical functioning of the interprofessional team.
4. ROLE identified attitudes about the nature and distinctiveness of one's professional role as a member of an interprofessional team.
5. PART identified attitudes about one's willingness to participate in the interprofessional team process.

Researchers used SPSSx to perform a multi-variate analysis of variance on the five combination variables.

Results And Discussion

All responses to the two sentence-stem items and other comments written by the subjects were compiled and summarized. These summaries resulted in the following qualitative profiles.

In response to the open-ended question, "The most important ethical issue facing my profession is...," subjects were quite specific in their answers. It might have been assumed that this would result in differences between the professions. This was not the case. Most students identified confidentiality and accountability as the most important ethical issue facing their profession. Other popular choices were the right to live or the right to die, misuse of power, euthanasia, abortion, and the changing role of professional practice.

Some responses were profession specific: student rights, content and method of teaching, cheating (education), and the unequal administration of justice (law). Several respondents saw professional attitudes about their clients as significant ethical concerns. accepting the life style and values of clients and a lack of caring were cited as ethical problems. Society's view of the professions and involvement in ethical decision-making were both cited by several students as important ethical problems.

In response to the open-ended statement, "The most important ethical problem that faces an interprofessional team is...," subjects cited many of the same concerns as in the previous question. Heading the list was accountability for the decisions that the team made. Other problems cited were truth-telling, allocation of scarce resources, misuse of power, right to live, right to die, euthanasia, the rights of the individual and the rights of society, and the quality of life.

Some concerns related to team practice and the life of the team. These included failure to value and respect other professions, lack of communication, and cooperation versus territoriality. Other concerns were related directly to attitudes about clients, namely, the self-determination of clients, and including clients in the definition of their problems.

The post-assessment did not reveal any new concerns on the part of respondents, although responses tended to be more elaborate.

These questions reveal the respondent's high level of interest in and familiarity with both the ethical problems facing professionals and ethical issues that arise as a result of team practice. Such a level of responses suggests that students may enter a seminar on ethical issues common to the helping professions seeking answers or at least the opportunity to reflect on ethical problems that they have already identified. This suggests a relatively high level of sophistication among the students in the course with respect to experience in professional practice and on interprofessional teams. This is confirmed by the mean age of the group (31 years) which suggests some professional experience prior to taking the course. It may be that future studies should include the identification of the level of professional and interprofessional experience.

Descriptive Data

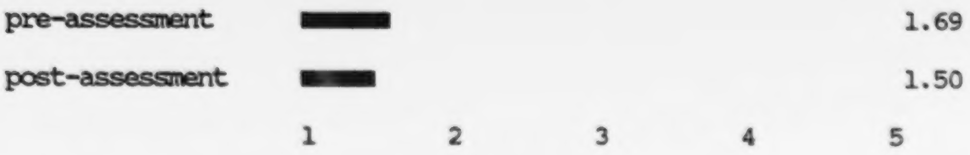
While significant differences between the two groups were few in number, the study identified some interesting information regarding the types of students who choose to study ethics from an interprofessional perspective. A student profile has been developed by researchers in relation to the five central themes of the study using the information compiled through the combination variables. While the profile reflects the data from only one class of students, it may serve as a guideline for identifying and professionals who are inclined toward interprofessional education and practice.

1. Value of other professions

Students in the sample expressed a strong appreciation for the value of the other professions. They consistently felt that they should be included on an interprofessional team. This conclusion applied nearly equally to each of the professions represented in the study. While there was a high degree of agreement among the subjects at the beginning of the study that all professions should be included on the interprofessional team, their responses to that set of questions on the post-assessment indicated an increased appreciation (level of significance .067) for the value of the different professions on an interprofessional team (figure 1).

Figure 1.

The combination variable VALUE identified attitudes about the value of including representatives from each of the professions on an interprofessional team. (The questions were inversely stated. The results, therefore, indicate an increased appreciation for including representatives of different professions on an interprofessional team.)



(Significant at 0.067)

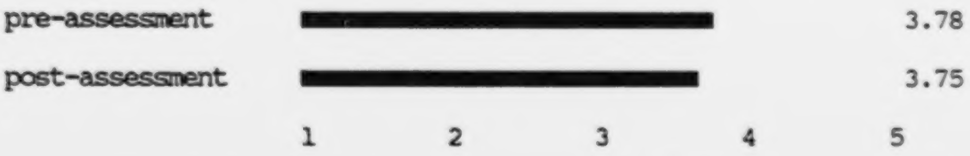
While this shift in attitudes does not carry a high enough level of significance to be considered reliable, it does indicate a trend that was confirmed in the previous study. It also identifies the students in the sample as persons who have a high level of respect for all of the professions and desire their participation on the interprofessional team.

2. Equality on the interprofessional team

Not only does the sample indicate openness to those from other professions as members of the interprofessional team, it also indicates that those completing the survey value the actual participation of all the professions. Students who take interprofessional courses seem to believe at the outset that persons from all the professions should participate in the interprofessional collaborative process on an equal basis (figure 2).

Figure 2.

The combination variable EQUAL identified attitudes about the egalitarian vs. hierarchical functioning of the interprofessional team.



According to participants, those on the team share equal responsibility for the discussion of ethical problems. Given the more typical characterization of the hierarchical interaction of the professions on teams where one profession may be seen to dominate or have more authority than the others, such a definitive response (mean 4.06; std. dev. 0.94; std. err. 0.10) in this area is surprising. This conclusion was supported by the responses to two other questions: "Everyone should have an equal say in an interprofessional discussion of ethical issues." (Mean 3.94; std. dev. 0.89; std. err. 0.10); "It is important that the input of every profession on the interprofessional team be included in the discussion of an ethical issue." (Mean 3.93; std. dev. 0.91; std. err. 0.10).

Equally interesting were the data regarding the leadership and expertise of interprofessional team members. Respondents felt that "A sympathetic hearing should be granted a team member whose expertise is not directly related to the ethical issue at hand." (Mean 3.64; std. dev. 0.95; std. err. 0.10). Similarly, respondents indicated that "When an interprofessional team is discussing an ethical issue the comments of the professional whose expertise is most directly related to the ethical issue should carry the most weight." (Mean 3.25; std. dev. 0.90; std. err. 0.10).

Results on questions related to leadership were similar. Respondents strongly indicated that interprofessional team members are not subordinate to team leaders (Mean 4.22; std. dev. 0.77; std. err. 0.08). Nor do some interprofessional team members carry more responsibility if the outcome of a decision is not satisfactory (Mean 3.33; std. dev. 1.05; std. err. 0.11).

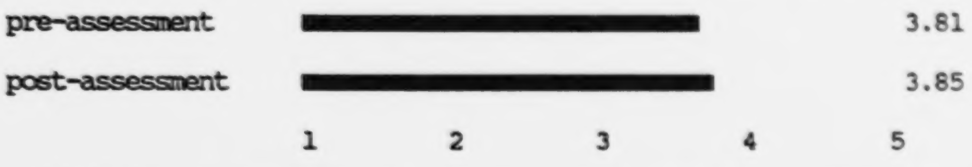
Such results would seem to indicate that students in the sample advocated a position which conflicts with traditional assumptions about authority and expertise. Authority seems for these persons to reside in the team itself when it is discussing ethical issues and ethical decision-making. Leadership assignments do not carry any intrinsic authority, nor does expertise in the area of consideration. The students in the sample are strongly egalitarian in nature and believe that teams should function in that manner. Equality on the interprofessional team is an important issue for them. Their convictions about it were strongly held at the beginning of the course and did not shift significantly during the quarter. (All shifts on the above questions, while generally not carrying a high enough level of significance to be cited, were in fact in the direction of supporting these conclusions.)

3. Participation on the interprofessional team

Subjects in the sample felt strongly that they should and would participate in interprofessional team activities in the discussion of ethical issues. This conviction was strongly held and did not change during the quarter (figure 3).

Figure 3.

The combination variable PARTICIPATION identified attitudes about one's willingness to participate in the interprofessional team process.



Respondents felt equally confident about their professional and personal ability to participate on an interprofessional team. They responded positively to the statement "I feel comfortable representing my profession on an interprofessional team that addresses ethical issues." (Mean 3.93; std. dev. 0.84; std. err. 0.90). The direction of the shift in their responses in the pre-and post-assessments indicated an increased confidence in this area, although the shift did not have a high enough degree of probability to be judged significant (0.41). Similarly, respondents felt that members of their profession "can adequately discuss ethical issues on an interprofessional team." (Mean 3.90; std. dev. 0.83; std. err. 0.09).

Respondents anticipated that they would be "active" participants "in the interprofessional discussion of ethical issues." (Mean 4.00; std. dev. 0.72; std. err. 0.08). Once again, while the shift in their attitudes did not have a high enough degree of probability to be judged significant (0.37), it is suggestive of a tendency on the part of the students to develop an even greater commitment to the interprofessional consideration of ethical issues during the course.

4. Descriptive conclusions

Students who responded to this study seem to represent a group which is characterized initially by a high degree of commitment to interprofessional collaboration in the consideration of ethical issues. At the outset of the course they equally valued the contributions of each of the participating professions. They were equitable in their view of team relationships, believing that all team members share equally in responsibility for decisions and the right to voice opinions. Leadership does not carry with it special privilege and authority and no profession has a right to more authority than any other. Finally, they believed that they and their profession could participate as equal partners in the interprofessional collaborative process. They anticipated that they would be active participants on interprofessional teams as they entered professional practice.

It may be that such a set of conclusions can produce a profile of the students most likely to engage in interprofessional education experiences. Such students may also be those most likely to engage in interprofessional practice. The ability to identify these types of students would be valuable to the degree that interprofessional education and practice are valued by a profession. Such profiles might also serve as one basis for developing licensure requirements and standards.

Shifts In Attitudes

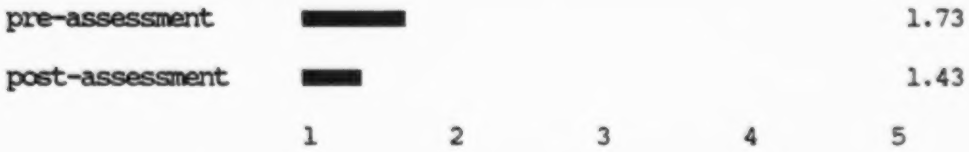
Attitude shifts were indicated in the study in several areas. Only those shifts with better than a 0.05 degree of probability (two-tailed) will be discussed in this section of the paper.

1. Value of Professions

Once again, student perceptions of some professions and their value to the interprofessional process changed significantly. Social work was valued more highly at the conclusion of the course as a participant on an interprofessional team that considered ethical issues (figure 4).

Figure 4.

The variable SOCIAL WORK VALUE identified attitudes about the value of having a social worker on an interprofessional team that addresses ethical issues. (The question was inversely stated. The results, therefore, indicate an increased appreciation for including representatives of social work on an interprofessional team.)



(significant at 0.041)

Responses to similar questions about the other professions indicate that the students in the course developed an attitude of acceptance for those professions, although the probability of the responses was not great enough to be considered significant.

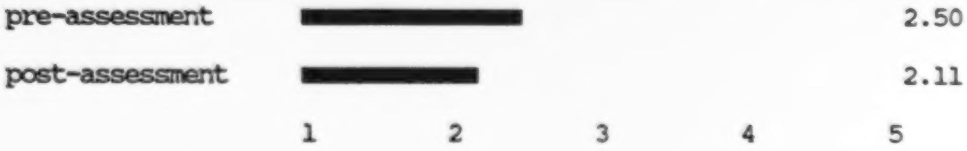
Such a shift in the attitude about social workers indicates that students gained respect for the contribution of social work as a profession to the interprofessional discussion of ethical issues. This shift may be accounted for by increased familiarity and socialization. The course is designed to place a student in proximity and dialogue with students representing the other professions. One goal of the course is that such interaction will encourage familiarity and trust between members of different professions and in turn develop an appreciation for the contributions the other professions can make to the discussion of ethical issues. The results would suggest that this goal was met, at least with respect to the social work students and their anticipated profession. It is hoped that barriers that may have been overcome during the socialization provided through the course will not be reconstructed as the students move into professional practice.

2. Conflict

Once again, one of the variables measuring attitudes about the role of conflict on interprofessional teams showed a significant shift on the post assessment as compared to the pre-assessment. At the beginning of the course respondents disagreed with the statement, "For the sake of group cohesiveness, conflict should be minimized during the discussion of an ethical issue by an interprofessional team." At the conclusion of the course, they disagreed with this statement even more conclusively (figure 5).

Figure 5.

The variable MINIMIZE CONFLICT identified attitudes about the role of conflict on an interprofessional team in its discussion of ethical issues. (The question was inversely stated. The results, therefore, indicate increased appreciation for the role of conflict in the work of an interprofessional team considering ethical issues.)



(significant at 0.049)

This data suggests that students believe that acknowledging and using conflict strengthens the interprofessional process and leads to better results and decisions. In our previous study, we observed: "Some group process theory suggests that conflict is a necessary condition of building cohesion in relation to group goals. Conflict may also be a necessary component in processing complex issues." (Casto, et.al., 1986, p. 212.) Certainly this theory would apply to the highly complex technological issues addressed in discussions of ethical problems confronting professionals in their practice. Resolution of those issues becomes more difficult if participants fail to acknowledge their conflicting interests and perspectives. Such conflicts are inevitable both because of differences in the process of professional socialization among the professions and because of the different expectations which clients and society have of the various professions.

This data is also interesting in relation to that cited in our previous study because it relates to teams engaged in the discussion of ethical issues rather than those designing client care plans. The latter groups are characterized by a high degree of task orientation and more specific closure. Treatments are developed, assignments are made, and interaction is more likely closely related to areas of technical expertise and specialization. On the other hand, in teams discussing ethical issues, members are as likely to draw on personal and societal opinion as they are to develop conclusions on the basis of expertise. Interaction is likely to be more diffuse and less task oriented. Conclusions are likely to be less definitive and more difficult to implement.

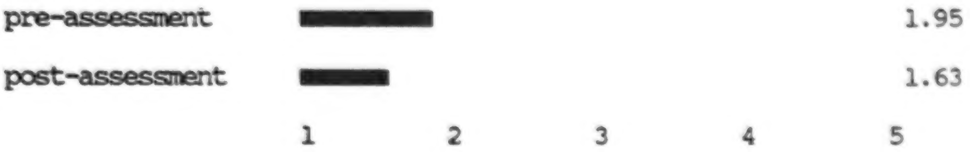
Therefore, the data would suggest that while significant differences exist between the nature of interprofessional care teams and interprofessional teams gathered to consider ethical issues, both teams are perceived as benefiting from the constructive use of conflict. This correspondence of results may be due to the fact that both types of groups are concerned with decisions that have a bearing on client care, although the decisions in issue oriented groups may be implemented over a longer period of time. In both types of groups, therefore, there may be a concern with the importance of identifying and managing conflicts in the interest of client care. Ethical decisions would seem to be considered as important as decisions about client care by those responding to the two studies.

3. Leadership

Responses to one statement about the relationship of team members to leaders indicated that students do not give any special significance or authority to designated leaders. Additionally, their conviction about this conclusion strengthened during the course (figure 6).

Figure 6.

The variable TEAM SUBORDINATE identified attitudes about the relationship between team members and team leaders. (The question was inversely stated. The results, therefore, indicate an increased sense of equality between team members and leaders.)



(significant at 0.055)

This shift is significant because it was not identified in the previous study and because it indicates that team members do not acknowledge any special authority to the role of leader. Such a role designation may generally be assumed to carry with it a certain degree of authority and power which is manifest in control of the agenda and flow of the discussion. If team members do not acknowledge this authority, there may be increased conflict to the detriment of the goals of the team. On the other hand, refusing to grant authority to team leaders vests that authority in other team members or the entire team. While the latter may make the work more cumbersome, it should result in a greater sense of shared responsibility among the team members on the interprofessional team.

These results point to the need for more definitive and explicit studies of the nature of leadership on interprofessional teams and the relationship between team members and team leaders. Such data should address the ambiguities of the current study in which only one question raised these issues. Questions which remain center on the nature and function of leadership in the interprofessional team, further definition of the relationship between team members and team leaders, and the possibility of "leaderless" teams.

Conclusions

The scope of this study is limited to one interprofessional education experience and the students who elected to respond to the questionnaire. It indicates, as in our previous study, that student attitudes can be changed. This is good news for those of us who teach in the hope that our teaching shapes attitudes that foster better client care. On the other hand, few shifts in attitudes were large enough to develop a level of significance that could be cited with any confidence. The process of changing attitudes is tediously slow. We may be able to impart knowledge and measure what our students have learned. This may be the focus of our efforts as teachers. However, attitude development has at least as much to do with effective professional practice and it is a much less precise art than the communication of knowledge. Interprofessional collaboration in professional practice depends in large measure on the effectiveness of educational efforts to convince students and practitioners of its value. Attitudes and values will need to be changed if interprofessional practice is to become a reality in any except the most limited circumstances. A more refined approach to both attitude development in interprofessional education settings and attitude measurement among professionals and students is necessary in order to enhance the work begun in these preliminary studies.

This study also suggests that students who are inclined toward interprofessional study have certain convictions and inclinations in common. They tend to be convinced of the value of collaboration even before they become members of an interprofessional team. They tend to be confident about both their ability to participate in interprofessional discussions and the quality of the contribution that their profession can make to those discussions. They believe that members of an interprofessional team should participate on an equal basis. No profession or individual has a de facto claim to authority.

The identification of these and other characteristics suggest that those entering professional practice possess certain attitudes about their careers, clients and professions that will influence their practice. The inclination to engage in professional practice from an interprofessional perspective may be instinctive for some students, but in most cases it will need to be developed. Most students will need to overcome the prejudices and conclusions that they learned through socialization into their profession. They will need to develop new skills and a new set of understandings that incorporate into their professional practice desirability of interprofessional collaboration.

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POSTER/MEDIA SESSION

ABSTRACTS

INTERACTIVE STYLE, MOTIVATIONS, AND TEACHING EFFECTIVENESS OF FIELD PLACEMENT INSTRUCTORS IN AN INTERDISCIPLINARY HEALTH TEAM PROGRAM

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Research in communications and in a social behavior suggests that individuals exhibit a dominance of one of three interactive styles, which Edwards (1973) calls analytic, cooperational, and instrumental. The analytic interactive style has been associated with effective helping behaviors, although results have not been as consistent for health professionals as for other types of helpers.

It is hypothesized in this study that teaching effectiveness as measured by student evaluations, correlates positively with analytic interactive style. An ex post facto correlational design is used with a convenience sample. Twenty-eight field placement instructors were asked to complete a demographic sheet, an open-ended questionnaire on motivation, and the Edwards' Situational Preference inventory which measures interactive style (reliability .804; validity well documented). The 28 students were asked to rate their preceptors' teaching effectiveness using the evaluation tool with which students have rated instructors in all courses at a large municipal college for several years. Twenty-three complete sets of data were returned.

Preceptors with dominant analytic style achieved high mean teaching effectiveness scores for their students than preceptors whose dominant style was cooperational. Motivations expressed by preceptors primarily fit the higher levels of Maslow's hierarchy of needs schema. Dissatisfactions reported gave clues to specific educational skills needed by the preceptors and specific gaps in preceptor-faculty communication.

This study adds a needed dimension to the sparse data reported on field placement instructors in interdisciplinary health education. The malleability of interactive style has implications for role definitions. Decisions to elicit and to reinforce either analytic or cooperational behaviors can alter the field placement instructors' teaching role and relationship to the Faculty advisors' role. The small number of preceptors, all associated with one college program, and the disproportion of social work professionals compared to nursing and health services administration, make it inappropriate to draw conclusions about interprofessional differences or to generalize beyond this program. Similar patterns across the three disciplines were seen regarding high-level motivations, expressed teaching needs, and student evaluations of teaching effectiveness.

AN INTERDISCIPLINARY CURRICULUM FOR A GERIATRIC EDUCATION INSTITUTE: A CASE STUDY*

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*This complete paper appears at the end of the poster session abstracts.

Five academic health centers located in four states selected faculty and preceptors from medicine, dentistry, nursing, physician assistant, and social work programs to attend a Summer Geriatric Education Institute. This case study discusses the Institute in three areas: (1) the decision makers; (2) the consensus process by which the interdisciplinary content was identified; and (3) the outcomes.

The Decision Makers: The Core Faculty and the project staff are comprised of four physicians; three Gerontology Center directors/associate directors; two nurses; two dentists; two educators; and one person each from pharmacy, physician assisting, and clinical gerontology; and an information specialist.

The Process: The first step was a needs assessment consultation by the Core Faculty with the appropriate colleagues on their own campuses. The results were reported and topics were scrutinized carefully as the issues of interdisciplinary versus discipline-specific sessions were debated. Through a series of meetings, consensus was reached on the topics, the goals, the scope, and the appropriate level of content (i.e. basic, intermediate, advanced).

The Outcomes: Discussion will include the 1986 Institute curriculum, the evaluation results, and the projected follow-up activities on the five campuses in the five health professional programs. The hypothesis that the Institute can increase emphases on essential interdisciplinary curricula in the health professions also will be examined.

MULTICLINIC

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Media Services

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This poster presentation allows participants to view videotapes produced by Western Michigan University's Multiclinic and to interact with members of the interdisciplinary team.

Several times throughout the academic school year health care students and professionals are given the opportunity to view and participate in an interdisciplinary diagnostic clinic that offers educational information and direct exposure to multidisciplinary approaches. It serves as an interdisciplinary exchange for faculty to stimulate and facilitate personal growth and provides a valuable service to clients in the community.

In 1972, a group of faculty members felt it important for students to experience the interdisciplinary process first hand and created the televised concept. Throughout the years, the clinic has evaluated individuals from infancy through adulthood with a wide-range of disabilities, received an international film award for rehabilitative programming, and has grown to include more than fifteen departments or programs in the University. These are the Departments of Biology and Biomedical Sciences, Blind Rehabilitation and Mobility, Counselor Education and Counseling Psychology, General Studies-Science, Occupational Therapy, Psychology, Special Education, Speech Pathology and Audiology, and the Gerontology Program, Music Therapy Clinic, Physician Assistant Program, Reading Center and Clinic, School of Social Work, and Television Services.

Client selection is based upon whether or not the client can significantly benefit from a Multiclinic evaluation, whether he or she has attributes which provide valuable learning experiences, and, most importantly, whether the client's problem or disability warrants interdisciplinary interaction.

INTERDISCIPLINARY APPROACH TO DEMENTIA EVALUATION USING THE CLINFO DATA MANAGEMENT AND ANALYSIS SYSTEM

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Many times the development of new diagnostic tools requires interdisciplinary cooperation. An emerging participant of the development team is the data administrator. The role of data administrator in research and development efforts is manifold. These roles were delineated during the validation of a new assessment instrument -- Dementia Evaluation with Computer Assistance (DECA).

Members of the Office of Geriatrics developed a multidimensional scale of dementia. This instrument was designed to assess both the degree of dementia and the percent of deterioration. A seventy-five item instrument was constructed. It assessed four areas: Activities of daily living (level of independence), intellectual and physical activities, psychosocial problems, and neurologic function.

The data administrator was responsible for all aspects of data management. These included selection of a database manager (DM), design of the database, data entry, data retrievals, and data analysis. The DM and database design have a major impact on the last three activities. For this project CLINFO was chosen as the DM and the database schema reflected the four areas of assessment. Simple data entry and retrieval procedures were developed. Finally, data were analyzed using CLINFO and BMDP.

THE COMMISSION ON INTERPROFESSIONAL EDUCATION AND PRACTICE AT THE OHIO STATE UNIVERSITY: ASSUMPTIONS, PROGRAM, AND DESCRIPTION OF COURSES

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The Commission on Interprofessional Education and Practice at The Ohio State University facilitates six graduate level courses, two state wide professional conferences and a wide range of other educational activities each year. The Commission program also includes public policy analysis of a wide range of subjects of interest to the helping professions. Public policy analysis is a program of the Assembly of the Commission which includes academic departments of other institutions and several additional state professional associations.

The program addressed the complex questions and problems raised by our technological society in the areas of changing social values, ethical issues common to the helping professions, interprofessional care of clients, and public policy formulation and analysis. It encourages interprofessional collaboration as a means of exploring issues and providing more complete solutions to complex problems.

The Commission is jointly sponsored by the Colleges of Education, Law, Medicine, Nursing, Social Work, and the School of Allied Medical Professions at Ohio State, the Columbus Cluster of Theological Schools including Methodist Theological School, Pontifical College Josephinum, and Trinity Lutheran Seminary, and the eight corresponding state professional associations.

INTERPROFESSIONAL EDUCATION IN A REHABILITATION SETTING: DESIGN FOR DEVELOPING INTERPROFESSIONAL PRACTICE SKILLS

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W. Brian O'Malley, Ph.D.
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The Commission on Interprofessional Education and Practice at The Ohio State University and the Pain Management Unit of the Department of Physical Medicine at The Ohio State University have cooperated for six years to provide clinical interprofessional education for graduate and professional students in medicine, nursing, allied medicine, law, education and theology. This program outlines the goals, objectives, teaching methods, and educational content of the course in clinical interprofessional education. The presentation describes the student population, faculty team of six, administration of the course within the structure of the University, and the relationship of the course to the Pain Management Unit.

The impact of the course on student attitudes toward interprofessional practice was assessed using a pre- post-seminar attitude survey. The survey was administered during the first and last class meetings of the 1984 and 1985 sessions of the course. The results indicate significant shifts in student attitudes toward interprofessional collaboration and the prospect of interprofessional practice.

AN INTERDISCIPLINARY CURRICULUM FOR A GERIATRIC EDUCATION INSTITUTE: A CASE STUDY

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Introduction

Four regional Geriatric Education Centers (GECs) received funding in 1983 as part of a federal initiative to advance the study of geriatrics in the health professions. Two years later, 16 more GECs were funded and the Ohio Valley Appalachia Regional Geriatric Education Center (OVAR/GEC), one of those new GECs, was established October 1, 1985, as a 3-year project. Funded in part by the Health Resources and Services Administration, USDHHS Public Health Service, the OVAR/GEC administratively is based at the University of Kentucky Chandler Medical Center. Affiliated institutions include East Tennessee State University, University of Cincinnati, University of Louisville, and West Virginia University.

Major areas of activity include didactic and clinical programs for key faculty, curriculum consultation and technical assistance to faculties, continuing and in-service course development, and information collection and dissemination. The OVAR/GEC focuses on the following disciplines: dentistry, medicine, nursing, physician assistants, pharmacy, physical and occupational therapy, respiratory care, and social work.

The project's primary goal over the three-year period is to enhance geriatric and gerontology education on the campuses of the five participating institutions and the geographic areas they serve. An annual Summer Geriatric Institute (SGI) represents a major endeavor by the OVAR/GEC to provide the faculty training opportunities necessary to achieve this goal.

This paper presents a case study on how an interdisciplinary core curriculum was developed for the OVAR/GEC's First Annual Summer Geriatric Institute July 28-31, 1986 at the Lexington Hyatt Regency. It is an example of the process by which consensus was achieved in order to develop both an interdisciplinary core curriculum and the faculty support necessary for its implementation. First THE DECISION MAKERS are described and then THE PROCESS by which consensus was reached is discussed. The final section, THE OUTCOMES, identifies the Institute's goals, the core interdisciplinary content areas selected for the 1986 OVAR/GEC Summer Geriatric Institute and summarizes the evaluations.

The Decision Makers

Faculty members from each of the five affiliated institutions comprise the OVAR/GEC core faculty. Monthly meetings provide the setting for collegial exchanges, information sharing, and decision-making. Reviews of the project's goals, objectives, and timelines provide the needed direction for plans of action and the impetus for their implementation.

Names of the core faculty members are given in the OVAR/GEC brochures distributed at this meeting. However, the disciplines of the core faculty, not listed in the brochure, are important to the consensus process for the SGI's interdisciplinary core curriculum:

Dentistry (2)
Medicine (2)
Clinical Gerontologist (1)
Gerontology Center Directors (3)
Nursing (2)
Pharmacy (1)
Physician Assistant (1)

The disciplines of the OVAR professional staff also are important complements to the regional core faculty's expertise:

Medicine (1)
Education (2)
Gerontology Center Associate Director (1)
Medical Information Specialist (1)

The OVAR/GEC core faculty and the professional staff formed the nucleus of a valid decision-making body to identify, analyze, and determine the content and the instructional design of an interdisciplinary core curriculum for the 1986 SGI.

The Process

Sound program planning is based on assessing the needs of those for whom a program is designed. At the initial meeting on November 7th, the core faculty agreed to consult with appropriate colleagues on their own campuses and bring to the December meeting topics which were deemed important for the first Institute. This important first step was crucial. Not only was it important in determining the content for the SGI but it also was important to involve other faculty members if the SGI was to be successful in "advancing geriatric education."

At the December meeting, pages and pages of flip charts were filled as core faculty reported on the topics they recommended and those requested by their colleagues. The validity of the topics was reviewed and the issues of interdisciplinary versus discipline-specific sessions were debated.

The theme "Developing Leadership in Geriatric Education" was selected as the title for the SGI and the Institute goals were developed. Staff then was asked to draft a tentative 3-day SGI schedule for further discussion at the January meeting.

During December the staff, in consultation with one of the core faculty, clustered the topics into major areas and developed a proposed schedule. The January core faculty reviewed the proposed schedule and made revisions to accommodate the following decisions: 1) a half day was added; 2) the most important topical areas were selected; 3) two sessions evolved as case studies with an interdisciplinary "expert" panel as discussants; and 4) three specific clinical sites were selected.

The consensus process culminated at the February meeting with the adoption of the SGI 3 1/2-day Institute content and schedule. Staff then proceeded to contact presenters recommended by core faculty and to the next steps in program design.

As each session was developed, core content was focused, level of audience identified, and literature searches conducted. Topics were carefully scrutinized in terms of their applicability and relevance. Staff maintained consultation with all presenters to assure an interdisciplinary focus to their content and an emphasis on the relationships among the psycho-social-physical aspects of older adults' health care.

The curriculum requirements of content sequence, continuity and integration were important design factors. The SGI demonstrated an instructional design which recognized that the content should be presented in an orderly manner to enhance learning. The need for active participant involvement and the recognition of adult "learners" as contrasted to "traditional" students were additional considerations. Therefore, a variety of formats, i.e. plenary and concurrent sessions, case studies, site visits, a workshop, and discussion groups were utilized. In addition, these formats "modeled" various instructional strategies so that the participants would have the opportunity to be involved experientially in strategies other than lecture-type presentations.

An evaluation plan was another important component of the SGI's instructional design process. A pre-institute information form was sent to all participants to determine educational background, experience in geriatrics/gerontological didactic and clinical areas, and goals for attending the Institute. These data provide both the documentation required for the project and a base for a post-institute questionnaire which will be sent early in 1987.

To evaluate the SGI, a comprehensive evaluation form elicited the participants' assessment of both content and presenter for each of the 20 sessions. In addition, five items addressed the perceived value or relevancy of the SGI to the participant's professional position in terms of new, useful information and their expenditure of time. Reference was made to the evaluation forms by moderators in each session to encourage participants to complete their forms to provide the core faculty and staff vital information for future planning.

Consensus is defined as "group solidarity in sentiment and belief... or group agreement." The primary objectives of the process described were to facilitate core faculty's discussion of core topics and discipline-specific versus interdisciplinary issues; to reach consensus on interdisciplinary core content; and to obtain some involvement of their colleagues by the core faculty members. The Institute's program design process accomplished these objectives.

The Outcomes

As a result of the consensus process, an interdisciplinary core curriculum was developed. Several aspects are essential to any discussion of an "interdisciplinary core curriculum." "Interdisciplinary" has to have an interpretation or meaning common to those involved. "Core" implies a focus on the common essentials or foundations of the knowledge base being addressed. A "curriculum" implies an instructional design and content appropriate to those attending; therefore, the intended audience is important. This concluding section comments briefly on these aspects, provides an overview of the SGI interdisciplinary core content, and summarizes the Institute evaluations.

Interdisciplinary

One definition of interdisciplinary is: "Interdisciplinary activity: collaborative and interdependent action among two or more persons of different disciplines, revolving around accomplishment of tasks or achievement of goals which could best be achieved through such collaborative efforts."[1]

The selection of the core content for the SGI accommodated this definition by providing participants with interdisciplinary information and relating that information to the total health care needs of the older patients/clients they and their students serve. The purpose was to foster the importance of 1) cooperation among health care providers as an effective and efficient approach to older adults' health care; and 2) including this concept in the education of the future practitioners enrolled in the OVAR/GEC affiliated institutions.

Core Content

The seven goals of the Institute were to:

1. Expand the general knowledge base about older adults as consumers of health services.
2. Recognize the need for increased emphasis on geriatric education in the affiliated institutions.
3. Promote discussions on the concept and issues of interdisciplinary geriatric education.
4. Familiarize faculty with strategies for integrating geriatric education into the existing health professional curricula and for developing new courses.
5. Observe the application of knowledge about curricula in clinical practice settings.
6. Enhance knowledge and understanding of course design, learning concepts, and instructional skills and behaviors which facilitate students' learning.
7. Explore the potential for inter-institutional and intra-institutional collaborative geriatric research endeavors.

These goals were developed into 20 Institute sessions conducted by 20 presenters from 10 states. Dr. T. Franklin Williams, Director of the National Institute on Aging, was the keynote speaker. Session titles were grouped in the following categories:

Six plenary sessions
  Perspectives on Aging: The National View
  Perspectives on Aging: The Regional View
  Aging Update
  Implications of Health Care Financing for Older Adults
  Geriatric Curricula Trends in Academic Health Centers
  Gaining Access to Curricula: Practical Observations and Experiences
Five concurrent sessions (of which two could be attended)
  Assessing Oral Health Needs of Older Adults
  Depression in Older Adults

Drug Dosing and the Older Adult
Health Promotion and Aging
Perceptions of Aging: Implications for Curriculum

Three site visits (of which one could be attended)
Maple Knoll Village Robert Wood Johnson Teaching Nursing Home (primary audience: nursing and social work)
Geriatric Dental Services (primary audience: dentistry)
Alzheimer Disease Research Center (primary audience: medicine and physician assistant)

Two case studies with panel discussants (2 sections)
Elder Abuse
I Don't Want To Eat

One workshop (3 sections)
Instructional Skills in Gerontology/Geriatrics

Three discussion groups (17 sections)
OVAR/GEC Research Networking: Exploring the Potential
Geriatric Education Leadership: Next Steps in My Discipline
Geriatric Education Leadership: Next Steps in My Region

Audience

The primary intended audience for the first OVAR/SGI were faculty invited by the affiliated institutions from five disciplines: medicine, dentistry, nursing, physician assistants, and social work. A limited number of preceptors and appropriate state and area health agency personnel also were invited.

The OVAR/GEC grant proposal estimated an attendance of 45 to 75 for the first SGI based on the number of faculty and preceptors each of the five affiliated institutions might invite. During the SGI planning process, the core faculty decided each institution could invite 20. Of the 94 who were invited, 92 attended. Table 1 summarizes the Institute registration by disciplines and host institutions.

TABLE 1
OVAR/GEC SUMMER GERIATRIC INSTITUTE - 28-31 JULY 1986
DEVELOPING LEADERSHIP IN GERIATRIC EDUCATION
Participants by Disciplines Invited by OVAR/GEC Institutions

Host Institution	Dentistry	Medicine	Nursing	Physician Assistant	Social Work	Other	TOTAL
ETSU	NP/1	6	5	NP	1	3	16
UC	1	6	3	NP	3	3	16
UK	8	5	8	3	3	12	39
UL	2	3	4	NP	4	1	14
WVU	2	1	1	NP/2	1	1	8
GECs	—	—	—	—	—	1	1
TOTALS	14	21	21	5	12	21	94

TABLE 1 NOTES

1. Core faculty & staff included in host institution categories
2. NP: No program at the host institution
3. NP/1: No program but faculty at the host institution in a related program.
4. NP/2: No program at the host institution but faculty in that discipline invited from an area institution
5. GECs: Director of Pacific GEC registered but unable to attend

The consensus process by which the interdisciplinary core curriculum was developed and the careful attention given to the instructional design of the Institute were valid if the products were received positively by the participants. The preceding brief description of the SGI's interdisciplinary core curriculum and those who attended provides a framework of reference for the final section of this paper.

Institute Evaluation

A discussion of the outcomes of the Summer Geriatric Institute must be in relation to the needs and goals as identified by the core faculty in the initial planning stages of development. This section will consider the results of the evaluation data from the Summer Geriatric Institute in terms of the participants' rating of the twenty core content sessions and of the value or relevancy of the content to their professional positions.

The evaluation form contained 30 items. Twenty items elicited the participants' assessments of each session's content on a 4-point scale as indicated in Table 2. These 20 items separated the assessments of the concurrent sessions, site visits, case studies, and the workshop by sections in an effort to increase the reliability of responses. The content ratings also were separated from the participants' ratings of the presenters in an effort to separate "the message from the messenger." Only the content ratings are reported in this paper.

Five items were designed to assess the value or the relevancy of the SGI to the participants' professional positions. These items were rated on a 5-point scale as indicated in Table 4.

The final five items asked the participants five open-ended questions concerning potential application of the concepts learned and suggestions for revision.

Seventy-two of the 90 participants (80%) completed the SGI evaluation form. Eleven respondents (15.3%) were dentists; 17 (23.6%) were physicians; 17 (23.6%) were nurses; 5 (6.9%) were physician assistants; 6 (8.3%) were social workers; and 16 (22.3%) were other disciplines, primarily education. An analysis of those who did not return their evaluation forms identified 10 who did not return their evaluation forms were either core faculty or project staff. When this number is deducted from the overall return, the adjusted response rate is 90%. Either the 80% or the 90% return rate provides a more than adequate base to analyze the effectiveness and relevancy of the interdisciplinary content.

The Findings

The ranking of the core content areas by overall content means (Table 2) provides important information for assessing the value of the interdisciplinary planning process. Five of the seven goals established for the SGI were developed in the top ten content areas as rated by participants. These goals include content on: 1) a core knowledge base; 2) strategies for integrating geriatric education into the existing health professional curricula and for developing new courses; 3) strategies for developing new instructional strategies to facilitate learning; 4) new knowledge as applied in clinical practice settings; and 5) the need for increased emphasis on geriatric education in the health professions. These had been identified by the core faculty in the early planning stages as areas of greatest need for their faculty in terms of developing curriculum, facilitating instruction, and implementing the core content within a tight curriculum.

The ten content areas ranked highest also reflect the diversity of format and relevancy of content suggested by many participants' comments as one of the best features of the SGI. It is interesting to note that two first day and one last day plenary sessions are included in the top five content areas Perspectives on Aging: National and Regional Views (1st day); and Access to Curriculum (4th day). Participants commented on the excellent content coverage in these sessions. Participants were also very positive toward the content of the Instructional Skills workshop.

Only three content areas were rated below the 3.0 level. It is interesting to note that these represent three different formats: one concurrent session, one plenary session, and one discussion group session. Two of those three areas' ratings were 2.9 which is not greatly different from the next highest mean of 3.1. The overall mean for the third content area was 2.2. Several factors may have contributed to these ratings. Participants' comments suggested the concurrent and plenary sessions needed greater interdisciplinary focus and increased relevancy and one session of discussion groups needed a more formalized structure.

Overall, there appears to have been a high level of agreement by the participants on the effectiveness of the interdisciplinary core content. The range of overall content means for all disciplines was from 3.6 to 2.2. Seventeen (85%) of the content areas were rated at the 3.0 level or above; eight (40%) were rated at the 3.5 level or above. These data indicate that the content was well-received by the participants and that the expected SGI curriculum outcomes were achieved.

TABLE 2

Mean Rating of Interdisciplinary Core Content by Participants
1985 OVAR/GEC Summer Geriatric Institute (N = 72)*

Scale: 4 = Excellent
3 = Good
2 = Fair
1 = Poor

*Based on 80% actual return; 90% adjusted return.

TABLE 2 (Continued)

Content Area	Mean rating
Health Care Financing	3.6
Access to Curriculum	3.6
Assessing Oral Health Needs	3.6
Perspectives on Aging: The National View	3.5
Perspectives on Aging: The Regional View	3.5
Aging Update	3.5
ADRC Site Visit	3.5
Depression	3.5
Instructional Skills Workshop	3.4
Case Study A	3.4
Case Study B	3.3
Leadership Discussion/Regional	3.3
Teaching Nursing Home/Site Visit	3.2
VA Dental Services/Site Visit	3.2
Drug Dosing	3.2
Perceptions of Aging	3.1
Leadership Discussions/Disciplines	3.1
Health Promotion	2.9
Research Networking	2.9
Curricular Trends	2.2
Summer Geriatric Institute Overall Content Mean	3.3

Table 3 gives each discipline's mean rating of the SGI content with a range of from 3.1 to 3.4. These data indicate that no one discipline perceived the content as more effective than another discipline and that there was a consensus of agreement by all the disciplines that the SGI interdisciplinary core content was appropriate.

TABLE 3

Mean Rating of Interdisciplinary Core Content by Disciplines
1986 OVAR/GEC Summer Geriatric Institute (N = 72)*

Discipline	Mean Rating
Social Work	3.4
Physician Assistants	3.4
Other	3.4
Nursing	3.3
Dentistry	3.2
Medicine	3.1
Overall Content Mean as Rated by Disciplines	3.3

* Based on 80% actual return; 90% adjusted return.

The perceived value or relevancy of the SGI to the participants' professional positions is the last issue to be addressed. Table 4 suggests that overall, the participants viewed the content as relevant and their time at the SGI well-spent. The 4.3 mean [on a 5-point scale] for time spent may be one of the key indicators of the success of the interdisciplinary planning effort to meet a wide variety of professional interests and needs.

The 4.2 mean for "Information applies to my work" and the lower 3.9 and 3.8 means for "Learned new information . . ." and "Some material new to me" may reflect the geriatric/gerontology background and experiences of the participants selected by the host institutions to be invited to the SGI. The core faculty members selected those colleagues who were in positions to lend support to efforts to advance geriatric education in their own disciplines, colleges, schools, and institutions. Therefore, it is reasonable to assume that those participants already had knowledge and expertise in the geriatric/gerontology content presented.

TABLE 4

Mean Rating of Institute Content Value to Professional Position
1986 Summer Geriatric Institute (N = 72)*

Item	Mean Rating
My time was well spent	4.3
Information applies to my work	4.2
Adequate time for discussion	4.2
Learned new information I plan to use	3.9
Some material new to me	3.8
Institute Overall Value Mean	4.1

Scale:
5 = Strongly agree
4 = Agree
3 = Neutral
2 = Disagree
1 = Strongly disagree

* Based on 80% actual return; 90% adjusted return.

This concludes a brief summary of the evaluation data. The results seem to indicate that the interdisciplinary planning efforts were successful and did assure an effective and relevant Summer Geriatric Institute. The SGI also provided both information and instructional design modeling. The data suggest that the health care professionals attending the SGI were affected positively by the interdisciplinary core content. Follow-up evaluation activities early in 1987 will attempt to determine the extent to which the participants invited by the five OVAR/GEC host institutions have applied or implemented the interdisciplinary concepts presented in the SGI.

This paper has approached a very complex issue via a report on the collaborative efforts of a regional core faculty in a very young Geriatric Education Center. The process by which these decision makers reached consensus on an interdisciplinary core curriculum for their first Summer

Geriatric Institute provides only one model by which important decisions in interdisciplinary geriatric education may be reached. Consensus requires an open and honest exchange, negotiation, and acceptance of a product which best represents the thinking of those participating in the process. The process was challenging and interesting; the outcomes indicate it was successful.

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